

Conference on
Higher Education Pedagogy



February 6-8, 2013
The Inn at Virginia Tech and Skelton Conference Center
Virginia Tech, Blacksburg, Virginia





Letter from the Conference Committee

The fifth annual *Conference on Higher Education Pedagogy* is focused on higher education teaching excellence and the scholarship of teaching and learning. The conference provides a forum for faculty members and graduate students to showcase their instructional research and model their pedagogical practice with the goals of demonstrating the quality of educational research and practice that is being conducted on campuses; providing a mechanism for faculty members to network with other like-minded faculty regarding pedagogy; and, expanding faculty members' understanding of and motivation for learner-centered teaching.

This conference would not be possible without the moral and financial support of our Conference Sponsors, General Sponsors, and Corporate Sponsors who have provided guidance and encouragement when needed, as well as funding. The conference organizers are also grateful for the support provided by the Vice President and Dean of Undergraduate Education at Virginia Tech, Dr. Daniel A. Wubah, who has supported this pedagogical project from its inception.

In this time of economic challenge, it is essential that we maintain the highest standards for higher education and continue to increase the effectiveness of instruction and the depth of student learning. We are pleased to join with our colleagues to foster educational excellence through the Conference on Higher Education Pedagogy.

A handwritten signature in black ink, appearing to read "Peter Doolittle".

Peter E. Doolittle
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A handwritten signature in black ink, appearing to read "Danielle L. Lusk".

Danielle L. Lusk
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Conference on Higher Education Pedagogy

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Opening Keynote Address

Helen Chen

Director of ePortfolio Initiatives
Stanford University

Electronic Portfolios and Student Success: A Framework for Effective Implementation

Dr. Chen will address *Electronic Portfolios and Student Success: A Framework for Effective Implementation*, highlighting that ePortfolios are more than just a technology: they imply a process of planning, keeping track of, making sense of, and sharing evidence of learning and performance. She is a researcher in the Department of Mechanical Engineering and the director of ePortfolio initiatives in the Office of the Registrar at Stanford University, as well as co-author of *Documenting Learning with ePortfolios: A Guide for College Instructors* (2011). She is also a co-founder and co-facilitator of EPAC, a community of practice focusing on pedagogical and technological issues related to ePortfolios (<http://epac.pbworks.com>), and works closely with the Association of American Colleges and Universities (AAC&U) where she is currently a member of the Assessment Advisory Group for the Quality Collaboratives project and a faculty member for the Institute on General Education and Assessment. Dr. Chen earned her undergraduate degree from UCLA and her PhD in Communication with a minor in Psychology from Stanford University.



Closing Keynote Address

Loreto Prieto

Professor of Psychology, Director of the US Latino/a Studies
Iowa State University

Culturally Competent Teaching and the “Browning” of the Academy: Working with Latino/a Students

Dr. Prieto will address *Culturally Competent Teaching and the “Browning” of the Academy: Working with Latino/a Students*, an approach to conceptualizing culturally competent teaching with Latino/a students and offer a summary of related teaching practices. Dr. Prieto is a Full Professor of Psychology and the Director of US Latino/a Studies at Iowa State University. He earned his undergraduate and doctoral degrees at The University of Iowa, in 1984 and 1996, respectively. He is also a Fellow of the American Psychological Association (APA) in both Divisions 2 (Teaching) and 17 (Counseling). Loreto has over 140 scholarly publications and presentations to his credit, as well as two books — *The Teaching Assistant Training Handbook: How to Prepare TAs for Their Responsibilities* (2001) with Steven Meyers and *Getting Culture: Incorporating Diversity Across the Curriculum* (2009) with Regan Gurung — with his work centering largely on the interface of pedagogy and issues of cultural diversity, especially concerning Latino/as. He has taught multicultural/diversity courses in undergraduate and graduate psychology and education curricula, and created Iowa State University's first US Latino/a Psychology course and minor in US Latino/a Studies.

Table of Contents

<i>Wednesday Sessions</i>	1
<i>Thursday Sessions</i>	83
<i>Friday Sessions</i>	185
<i>Poster Sessions</i>	236
<i>Author Index</i>	300

RESEARCH IN TEACHING AND LEARNING

Are College Students' Textbook Reading and Instructional Preferences Related to Their Self-Efficacy and Disposition? <i>Skidmore, R., Conner, II, T., and Aagaard, L.</i>	81
The Blended Education Collaborative: Building Innovative Pathways to Learning <i>Bogner, L., and Dodd, B.</i>	133
A Case Study of a Training Program for Teachers of Mathematics <i>Ramirez, M.</i>	200
Challenging Pedagogies During Crisis: Multiculturalism, Its Limits, and Alternatives for Change <i>Sanchez, J.</i>	165
Cultural and Linguistic Challenges Emirati and Saudi Students Face in the U.S. Universities <i>Al Murshidi, G.</i>	166
Developing Empowering Educational Experiences Through Creative Practices and Teacher Research <i>View, J., DeMulder, E., and Stribling, S.</i>	29
Digital Internships: Examining Preservice Teacher's Inquiry Practice in Online Responses <i>Dredger, K., Matin, J., and Nobles, S.</i>	234
A Dynamic, Interactive Approach to Learning Engineering and Mathematics <i>Beaulieu, J., and Vick, B.</i>	198
Experiential Learning: An Exploration of Situated and Service Learning <i>Huisman, S., Edwards, A., and Huisman, S.</i>	46
Flipping: The Comfortability and Workable Aspects in Higher Education <i>Gaikwad, P.</i>	131
A Framework for Utilizing Scaffolding in Higher Education <i>Park, H., and Choi, I.</i>	97
Global Service Trips as a Means to Cultural Competency 2.0 and Empathy Development <i>Dokter, C., and Dirkx, J.</i>	181
How White Students Learn about Race and Privilege: Curricular and Co-Curricular Experiences <i>Robbins, C.</i>	150
Large Classroom Interactions: Evaluating How Clickers Can Create a Seminar Experience for 300 Students <i>Brians, C., Dounoucos, V., and Frye, C.</i>	15

Lessons Learned from the Formative Evaluation of Physics Recitation <i>Calixte, M., Wu, R., and Brill, J.</i>	65
Narrative Writing as a Student-Centered Approach to Learning the Process of Science <i>Lee, E.</i>	79
Nursing and Paramedic Students Collaborate in CPR/BLS Simulation Activities <i>Staykova, M., Cromer, M., Stewart, D., Everidge, J., Jones, S., Bailey, C., Lyon, C., Sharp, M., Wilson, R., and Carhart, E.</i>	217
Personality Pad: Online Multisource Feedback for STEM Students Enhances Academic Performance <i>Pappas, J.</i>	116
Popularity vs. Pedagogy: What Do We Know about ePortfolio? <i>Bryant, L., and Chittum, J.</i>	232
A Project-Based Simulation Model for Construction Education <i>Goedert, J., Rokoeisadabad, S., and Pawloski, R.</i>	31
Research Instruction Through Librarian-Faculty Collaboration..... <i>Hsieh, M., Hofmann, M., Dawson, P., and Titus, M.</i>	63
Striving to Care in the Midst of Chaos: Impact of the Use of Narrative Pedagogy <i>Miller, W., Cumbie, S., and Osmond, C.</i>	48
Tackling the Problem of Problem-Based Learning <i>Brent, R., Deaton, M., Tang, J., Mary, H., Altaii, K., and Goodall, P.</i>	215
Transformative Instruction Via Study Abroad: Students' Self-Efficacy and Global-Mindedness <i>Walker, T., Osa, J., and Waajid, B.</i>	183
Using Visual Imagery to Improve Performance and Enhance Flow: Is the Effort Worth the Reward? <i>Rakes, L., and Jones, B.</i>	114
What Happened to My Class? Facilitating Teaching and Learning in a Merged Classroom <i>Swayze, S., and Jakeman, R.</i>	99
Where is the Human Connection in Online Course Pedagogy? A Feminist Perspective <i>Glass, V., and McCann, B.</i>	148

TEACHING AND LEARNING IN PRACTICE

21st-Century Digital Writing: Peer Review, Faculty Feedback, and Research with iPads
McCrery, E., and Sparrow, J.203

All Problems Are Not Created Equal: Intentional Design of Learning Experiences Grounded on an Innovative and Versatile Problem Based Learning Model
Pierrakos, O., Nagel, R., Watson, H., Anderson, R., Pappas, E., Gipson, K., Barrella, E., Karabelas, J., El-Adaway, I., Yazdani, S., and Kander, R.25

Applying Gaming Principles and Open-Source Tools to Course Redesign
Kopcha, T., and Choi, I.61

Augmenting Problem-Based Learning with an Analysis of Instruments
Moore, D.211

Authentic Teaching: Lessons from Instruction Librarians
Walker, C., and Click, A.73

Building and Sustaining Community Engagement Across Courses and Programs
Clements, T., and Bohannon, C.159

Building Professional Praxis Through an Electronic Portfolio Assessment
Howard, B., Gummerson, W., Guramatunhu-Mudiwa, P., Olson, G., Angel, R., and McGee, J.5

The Confluence of Pedagogy and Sustainability: Possibilities and Impediments to Systemic Curricular Changes in Higher Education
Balthazor, R., Byers, T., Dorison, A., and Quick, P.179

Connecting with Students: The Use of Hand-held Interactive Whiteboards
Hanson-Utley, J., Donahue, M., and Eads, A.53

Contemplative Classroom Pedagogies for Improving Attention and Focus
Moutin, S.140

Creating Accessible Instruction in a Digital Environment
Asselin, S., and Cox II, L.75

Creating Classroom Community with Reflective Blogs
Bach, D., Alexander, J., and Alexander, J.119

Creating Engaging Classrooms and Inspiring Future Teachers
Robinson, A., Rosenkrantz, S., Martin, C., Bear, B., Guldin, S., Simonetti, J., Piilonen, L., Glasson, G., Brand, B., and Amelink, C.142

Creating Opportunities for Collaboration Across Programs in 3D Immersive Virtual Worlds
Howard, B., and Tashner, J.87

Critical and Creative Thinking by Design
Finn, T., Baum, L., and Newbill, P.191

Crossing the Divide: Bridging the Distance Between Online Faculty and Students
Thompson, J.173

Culturally Appropriate Online Learning: A Multifaceted Challenge
Edmundson, A.230

Designing Instruction for Multi-Leveled Learning in Undergraduate/K-12 Outreach Programs: A Panel Discussion <i>Magliaro, S., Baum, L., Brand, B., Kasarda, M., Simonetti, J., Peebles, J., and Rosenzweig, M.</i>	106
Development of Students' Ability to Assess Information Through Ranking of Online Learning Resources <i>Tvrezovska, N., and Tarnavska, T.</i>	27
Does Lecturing Put You to Sleep: How Problem-Based Learning Can Awaken Your Classroom <i>Newstetter, W., Hunter, D., Paretti, M., and Matusovich, H.</i>	189
Engaging Campus and Community: Developing Community Partnerships Through Service-Learning <i>Helms, J., Niewolny, K., and Clark, S.</i>	57
Engaging the Adult Learner: Six Active Learning Strategies for the Higher Education Classroom <i>Miller, S., and Maynard, K.</i>	125
Enhancing Student Engagement, Faculty Presence, and Community in Online and Blended Courses: Using VoiceThread, Blog Tools, and Other Web 2.0 Technologies <i>Budhai, S., Loomis, F., and Ortagus, J.</i>	220
Enhancing Student Motivation Using Self-Determination Theory: Practical Applications for the Online Environment <i>Epps, S., and Barton, A.</i>	91
Entering the Hallowed Halls of Cyberspace: Developing Strategies for Teaching, Interacting, and Delivering Information Online <i>Turner, M., and Turner, S.</i>	207
“Expedition Leadership” – Faculty Support and Academic Leadership Development at Virginia Tech <i>Hogan, A., and Massey, J. D., Jr.</i>	195
Flipped Faculty Development: Applying Effective Classroom Strategies for Professional Learning <i>Kelly, K.</i>	197
Flipped Out: Successful Strategies for Improving Student Engagement <i>Nolan, M., and Washington, S.</i>	93
Flipping Higher Education: Using Video Prep Lessons to Change the Classroom Learning Experience <i>Dove, A.</i>	110
Flipping the Classroom: Creating Online Modules to Enhance Student Learning <i>Barber, J.</i>	127
Four Ways to Engage Any Class: Strategies and Empirical Evidence <i>Zakrajsek, T.</i>	72
From Pedagogy to Andragogy: Best Practices for an Engaged Learner <i>Lubin, M.</i>	108
Grading by Experience Points: An Example from Computer Ethics <i>Gehring, E.</i>	171
Graduate Advising Matters: Role of Students in Fostering Effective Advisor-Advisee Relationships <i>Nakamura, A.</i>	95

Implementation of a Clinical Education Model Across Academic Disciplines <i>Samdperil, G., and Wherley, V.</i>	11
Implementation of a Competency-Based Curriculum: Challenges and Benefits of a Program-Approach Model in Reforming Undergraduate Programs <i>Kozanitis, A., and Forest, L.</i>	213
In Between Classes: Engaging Student Learning in Unconventional Settings <i>Cosgrove, E., and Elmer, L.</i>	136
Innovation in Teaching and Technology: Designing a Faculty Development Initiative in Higher Education <i>Rieber, L., Walker, B., and McCalla, L.</i>	228
Inspiring Professional Students to Engage in Meaningful Service Learning Experiences <i>Brinegar, L., Woleben, C., Marlowe, E., and Carter, T.</i>	44
It Doesn't Take a Village...It Takes a Personal Learning Network <i>Schirr, G., and Schirr, L.</i>	187
It's Elementary My Dear Watson: Using Case Studies in Higher Education <i>Dunzweiler, D.</i>	177
Learning Literacy from the Inside Out: Exploring Personal Literacy Journeys with Bodystorming <i>Azano, D., and Horst, P.</i>	169
Leveraging Pedagogical Expertise and Quality of Technology Based Design Education Using Online Video in Course Content <i>Foster, S., and Halbstein, D.</i>	153
Library Resources, Copyright, and Open Source Materials or How to Use Free Stuff and Still Cover Your ... Assets <i>Turner, R., and Turner, S.</i>	226
Living Learning Communities: Models of Authentic Community <i>Grohs, J., Keith, C., Penven, J., and Stephens, R.</i>	38
“Loneliness Seeking Communion”: Narrative “Pedagogies of Suffering” in Undergraduate Interprofessional Education <i>Osmond, C., Cumbie, S., and Miller, W.</i>	129
Making it Personal: Classroom Lessons Learned from a Community-Based Program <i>Newbill, P., and Kilkelly, A.</i>	104
Mediating Competing Values Among Students in Service-Learning Courses <i>James-Deramo, M., Axsom, D., Ovink, S., Pendleton, L., and Collins, K.</i>	23
Modeling Writing Autoethnography as a Research Method and Pedagogical Tool <i>Munly, K., Dana, S., Grimes, M., Henderson, J., McCloud, J., Tilley-Lubbs, G., Westfall, S., and Smart-Smith, P.</i>	224
Motivation through Mentoring: Faculty Mentor Project for Promoting and Supporting Move to Online Learning <i>Baab, L., and Katz, B.</i>	157

Muppet Pedagogy: Bringing <i>Sesame Street</i> to the College Classroom <i>Lunsford, S., Breneman, D., and Ghiaciuc, S.</i>	38
Neuroscience Research Implications for Higher Education Pedagogy <i>Sturm Anderson, P., and Anderson, D.</i>	89
One Size <i>Still</i> Does Not Fit All <i>Turner, W.</i>	175
The Pecha Kucha 20x20 as Assessment: Creation, Selection, Explanation, Synthesis and Delivery <i>Dredger, K., Kajder, S., and Beach, C.</i>	121
Peeling the Onion: Diversity and Inclusion for All Students in All Classrooms <i>Tilley-Lubbs, G., and Popova, D.</i>	193
Personal Learning Environments, Social Media, and Self-Regulated Learning: A Natural Formula for Connecting Formal and Informal Learning <i>Dabbagh, N., and Kitsantas, A.</i>	18
Preparing Students for the Virtual Campus: Expanding Our Definitions of College Readiness <i>Hashmi, G., and Foster, M.</i>	13
Promoting Civic Engagement in Lower Level General Education <i>Bartley, A., Blevins, B., Ren, M., and Russell, H.</i>	222
A Quick Guide for Teaching Academic Self-Regulation <i>Mokri, P., and Sherman, T.</i>	77
Recoding and Reflection Using Web 2.0 <i>Dredger, K., Martin, J., and Horst, P.</i>	3
Redesigning a Didactic Course for Case-Based Learning: Learning Resources Enhancing Veterinary Students' Intra-Operative Decisions <i>Choi, I., Park, H., Lee, Y., Ju, H., Schmiedt, C., Cornell, K., Radlinsky, M., and Creevy, K.</i>	161
Reflective Practice, Critical Writing, and Collaborative Knowledge: Blogs for Active and Engaged Learning <i>Mollin, M., and Sparrow, J.</i>	138
Retrieval Practice and 3D Stereo Images Enhance Learning Online <i>Kolitsky, M.</i>	163
S(t)imulating Students: Using Case-Study Simulations to Teach the Perspective of Constraint <i>Frusetta, J.</i>	42
ScanTrons? We Dn't Nee' No Stnk'n ScanTrons: i-Clickers, Testing, Cheating and Large Classes <i>Lacoste, J.</i>	70
Service Learning to Enhance Transformative Learning Experiences <i>Franz, R., Shrestha, S., and Fasnacht, E.</i>	9
Strategies for Developing Future Faculty: A Blended Course on Teaching with Technology <i>Clouser, S., and Clouser, S.</i>	123

Student-Written Case Studies: A Win-Win for Faculty and Students <i>Kaufman, E.</i>	144
Surveying the Landscape of Tools that Facilitate Collaboration, Online Communication and Project Development <i>Terry, K. P.</i>	20
Taking the Plunge: Using Experiential Methods on the Journey Toward Cultural Competency <i>Blakeslee, S., and Arsenault, K.</i>	7
TEaCH TALKS: Pedagogical Training for Graduate Teaching Assistants <i>Kajfez, R., McNair, L., and Adams, S.</i>	203
Teaching with the Power of Reflective Thinking <i>Parkes, K.</i>	20
There's More to Teaching than the Content: The Need for Study Skills Lessons <i>Jester, J.</i>	112
Tips for Teaching with Movies: Using Film to Provide Meaningful Learning Experiences <i>Walz, J., Creamer, E., and Kaufman, E.</i>	36
Training Teaching Assistants: Overcoming Resistance <i>Brown, C.</i>	34
Understanding Basic Concepts of ePortfolio Pedagogy and Choosing the Best Technology <i>Blevins, S., Zaldivar, M., and Summers, T.</i>	85
Universal Instructional Design: Accessing the Core Curriculum for Students with Blindness <i>Hartman, D., Bhandari, N., and Chowdhury, S.</i>	55
Using Dialogic Inquiry in Higher Education <i>Rundell, F., and Sheety, A.</i>	59
Using Games for Multiculturally Inclusive College Student Learning <i>Lo, Y.</i>	209
Using Mendeley for Collaborative Learning <i>Eddy, P., Khwaja, T., and Stone, S.</i>	51
Using Social Media to Extend the Walls of the College Classroom <i>Domizi, D.</i>	102
Using Student Generated Video to Enhance Feedback, Instruction and Assessment of Psychomotor Skill: A Preliminary Report <i>Mickle, A.</i>	155
What a Class on Zombies Can Teach Us about Strategies and Technologies for Effective Multi-Disciplinary Teaching <i>Jester, J., Beaudin, J., Harris, M., and Ernst, N.</i>	68
You Do What? Interprofessional Education for Improved Teamwork in the Real World <i>Krajnik, S., Brennan, K., and Epperly, R.</i>	146

POSTERS

The 21st Century Pedagogical Educational Approach and Learning Model
Viar IV, R.262

Achieving Health Equity Through Centers of Teaching Excellence
Quinteros, M., and Burrell, D.238

Adapting Feminist Pedagogy to an Online Course
Hodge, D.239

Adaptive, Automated Feedback for Encouraging Adherence to Methods
Buffardi, K., and Edwards, S.271

Addressing Interdisciplinary Science Understanding Through On-Campus Collaboration
Fleenor, M., Rearick, M., and Poli, D.239

Exploring Immigrant Farming Programs and Social Capital: An Innovative Approach to Program Assessment...240
Hightower, L.

An Integrative Literature Review on International Student Access and Success Issues
 in Postsecondary Education
Yu, X.240

Analysis of Listening Preferences of Hospitality Management Students
Kaufman, T.240

Assessing a Large Free-Form Student Wiki: Asking Questions After Multiple Years of Student Work
Swenson, K., Hagedorn, S., Patton, R., and Ruggiero, C.271

Assessing Culturally Responsive Classroom Management Self-Efficacy
Putman, M.241

Autoethnography as a Way to Learn Academic Skills and Increase Relevancy and Motivation
Keinan, A.272

B-AWARE: Guidelines to Support the Self-Regulated Learning of College Students
Chang, Y.241

Circumventual Pedagogy: A New Paradigm for the 21st Century
Letizia, A.272

College Students' Perceptions of Social Presence in the Virtual World Classroom
Bowers, K.273

Formative and Design Experiments (FADE) and Systemic Design of Instruction (SDI):
 A Marriage of Love, Not Necessity
Soares, E., and Barksdale, M.273

Concept Mapping: A Critical Thinking Technique
Harris, C., and Zha, S.241

Connecting the Dots: Food + Culture = Agriculture
Abaye, O., Welbaum, G., and Xia, K.273

A Content Analysis of Research Articles about the Recruitment and Retention of Women <i>Long, T.</i>	237
A Contextual Approach to Researching and Teaching Sustainability <i>Pappas, E.</i>	270
A Cooperative Effort at Two Peer ACC-Institutes to Assess Common Student Misconceptions Using a Concept Inventory <i>Stevens, A., Daniel, S., Melville, S., Popham, D., Scharf, B., Schubot, F., Seyler Jr., R., Yang, Z., and Host-Pathogen Interaction Teaching Community, U.</i>	270
Critical Thinking Skills in a Large Lecture Class: Effects of Body Weight and Exercise Level <i>Good, D., and Anderson, A.</i>	274
Designing a Support Structure for the Conversion of Classroom Lessons to Online Delivery <i>Carbonara, D.</i>	242
Designing Courses that Prepare Students for the Global Workplace <i>Taraban-Gordon, S.</i>	274
Designing Intuitive Web Pages for e-Learning <i>Obilade, T.</i>	242
Developing an Autonomous Entry-Level Doctor of Physical Therapy Practitioner: The Science and Art of a Clinical Education Program <i>Harper, B., Jagger, K., Castleberry, J., Siyufy, A., Aron, A., Huth, R., Swanson, E., and John, E.</i>	274
Developing Teaching Proficiencies for New Instructors Through a Learning Community <i>Barb, C., Gilmore, T., Hall, M., Hall, T., Henshaw, N., Lawrence, A., Meier, C., Miller, R., Moyo, L., Munson, J., Ogier, A., and Thum, S.</i>	242
<i>DIALOGUES</i> <i>Sosa, C.</i>	243
The Dialogue Journal: Developing Critical Thinking Skills in the Spanish Literature Classroom <i>Flores-Silva, D., and Bañuelos-Montes, J.</i>	294
Do You Get More Than You Pay For? How Open-Access Textbooks Can Facilitate Radical Re-Design of College Classes <i>Gonyea, N., and Beitzel, B.</i>	274
e-Surance: Ensuring Quality Dissertations in a Burgeoning Online Doctoral Program <i>Milacci, F., Rockinson-Szapkiw, A., and Spaulding, L.</i>	243
e-Transformation: Transformative Learning Techniques to Use in Online Courses with Sensitive Topics <i>Austin, J., Barrow, K., and Few-Demo, A.</i>	275
Educational Uses of Digital Storytelling <i>Harding, A.</i>	276
The Effect of Crib Sheet Use on Student Exam Performance <i>Hartman, T.</i>	262
Effective Teaching Characteristics in Post-Secondary Introductory Biology and Chemistry Courses <i>Richardson, T.</i>	243

Effects of Extra Credit Opportunities on Students' Time Management on Large Programming Assignments <i>Allevato, A., and Edwards, S.</i>	276
Employability Skills for Humanities and Social Sciences College Students <i>Albaili, M.</i>	244
Engaging Adult Learners in Designing, Implementing and Assessing the Learning Process <i>Sheety, A., and Melton, A.</i>	277
Engaging Online Students: Threaded Discussions - Hit or Miss? <i>Reese, B.</i>	277
Engaging Students in Active Learning Using Concept Mapping <i>Staykova, M., Murray, R., Huson, C., and Porter, A.</i>	277
Enhancing Affective Learning Outcomes Through the Use of Objective Structured Clinical Examination (OSCE) <i>Rathnam, R., and Ramirez, M.</i>	244
Enhancing Learning Through Curatr, a Social Learning Platform <i>Rea-Ramirez, M., Rathnam, R., and MacMeekin, M.</i>	278
Sages to the Side: A Learner-Centered Mindset at the Agriculture Education Training Research (AETR) Institutions of Senegal <i>Guilbaud, P., and Abaye, O.</i>	244
Evaluating and Demonstrating "Inquiry" as an Approach to Teaching General Education <i>Ninkovic, J., and Riutta, S.</i>	244
Evaluating Learning Through Note-Taking and Hands-On Strategies <i>Mitchell, S.</i>	245
Evaluating Portfolio Work with Rubrics and Other Methods of Feedback <i>Kincade, D., and Dull, E.</i>	278
Evaluating the Effectiveness of Teaching Methods that Encourage Increased Student Engagement and Active Learning <i>Bezy, R., Dew, D., Hruska-Hageman, A., Stehnova, J., Feldt, R., and Bernstein, N.</i>	245
Evaluation of Student Satisfaction with a Distance Learning Program <i>Sharp, M., Jones, S., Strickland, A., and Tousman, S.</i>	246
Examining Socrates' "Examined Life" Principle for Higher Education and Professional Training <i>Hostetler, D.</i>	278
Experiential Learning Models: Using Practitioner Research Tools in the Classroom <i>Collier, J.</i>	279
Are American Public Higher Education Institutions Meeting the Needs of Minority Students? Exploring Educational Attainment of Undergraduate Minority Students in Land-Grant Institutions Across the United States <i>Hightower, L., Lu, H., Marchant, M., Vance, E., Richardson, W., Smith, E., and Mack, T.</i>	279
Facilitating Online Collaboration with Google+ Hangouts <i>Beaudin, J.</i>	280
Facilitating Students in Educational Communication <i>Amelina, S., and Tverezovska, N.</i>	280

Faculty Experiences with Teaching Online and Face-to-Face Courses <i>Schilder, E., Ondin, Z., Ervine, M., Alzahrani, T., Tao, C., and Burge, P.</i>	247
Faculty Taking Students Abroad: Who Are They? <i>Mariano, G.</i>	247
From Learning-Centered Teaching to Significant Learning Experiences: Reflections on Fostering Lasting Learning <i>Gramling, S., Gramling, S., Lord, B., and Collison, E.</i>	247
From Start to Finish: Effective Classroom Assessment Techniques <i>Familant, J.</i>	280
Funding and Supporting Faculty Online Course Development:VA Tech’s Model for Promoting High Quality Online Learning <i>Baab, L., and Stoneking, D.</i>	248
Group Work in Online Classes – What Works, What Doesn’t, and How Do We Know? <i>Sliko, J.</i>	248
Growth and Renewal for Early Career Faculty <i>Stallions, M., Murrill, L., and Earp, L.</i>	249
Higher Education in Iraq: Curriculum Change..... <i>Olin Zimmerman, S., Greene, M., and Mason, L.</i>	281
Higher Education of Future Environmentalists in the Field of Environmental Management in Ukraine: Integrated Modeling Approach <i>Shofolov, D.</i>	249
The History of Distance Education in West Africa: A Critical Appraisal <i>Obilade, T.</i>	263
How to Keep Your Sanity: Online Instructor Edition <i>Lusk, D., and Mariano, G.</i>	281
How to Teach Online: One Course Design with Three Delivery Options <i>Orey, M.</i>	249
Immersive, Authentic Learning Contexts: Student Reflections on Personal and Professional Growth <i>Splan, R., and Porr, S.</i>	250
Improving Student Learning Outcomes Through Course-Based Service Learning <i>Brackette, C.</i>	250
Incorporating Wellness into the First-Year Experience <i>Krackow, M., Richardson, H., Johnson, J., Joyce, C., Dryden, S., and Coale, J.</i>	251
Integrated Science Content and Methods: Comprehensive Courses for Pre-service Elementary Teachers <i>Vinion Dubiel, A.</i>	281
Intervisitation: Opening the Door to Innovative Strategies that Meet the Needs of a Diverse Student Body <i>Nunez Rodriguez, N., DiSanto, J., Feliz, I., Robertson, C., Morales, A., and Jones, C.</i>	282

Investigating Motivational Orientations and Self-Regulated Learning Outcomes of Millennial College Students in the United States and India <i>Shastri, A., Wang, J., and Kesarkar, M.</i>	282
Is Plagiarism in the Eye of the Beholder? <i>Van Patten, S., and Benjes-Small, C.</i>	251
A Journey Through Disciplinary Pedagogy: Translating Research into Instructional Practice (TRIP) <i>Preston, M., and Quesenberry, B.</i>	237
Knowledge Construction in a Java Programming Online Help Community: An Examination of Social and Argumentative Dynamics <i>Teo, H.</i>	251
Leaving the “Lecture” Behind: A Student-Driven Approach to Teaching Calculus <i>Childers, A., and Taylor, D.</i>	282
Linking Principles of Psychology to Higher Education Pedagogy: Using Social Stories to Get Inside the Minds of Students <i>Flood, J., and Leone, D.</i>	252
Lowering Development Barriers in Educational Game Design <i>Bart, A., Deaton, R., and McGinnis, E.</i>	252
Making Connections: Junior Nursing Students with Elders Living in an Independent Living Facility <i>Wilson, K., Anderson, M., Lyon, C., and Robinette, K.</i>	283
Male Elementary Teachers: An Under Represented Minority <i>Patrick, M., and Pearson, C.</i>	284
Medical Student Education for Ultrasound Guided Injections in the Lumbar Facet Joints <i>Uryasev, O., McNamara, J., and Dallas, A.</i>	284
Methodology of Organizing Practices for Future Environmentalists in Higher Education of Ukraine <i>Strokal, V., and Ridei, N.</i>	285
Mobile Information Literacy: Using Tablets to Promote Inquiry Skills Students Need to Succeed <i>Miller, R., Moorefield-Lang, H., and Meier, C.</i>	253
The Model of Professional Competence of Future Environmentalists <i>Rybalko, Y., and Ridei, N.</i>	263
More than Just the Words: Academic Success for English Learners Through Problem Posing <i>Popova, D.</i>	253
Multicultural Design Projects Enhance Students’ Professional Preparation <i>Parrott, K.</i>	253
Multicultural Grade Point Average: What We Can Learn from It <i>Staykova, M., and Huson, C.</i>	285
Multiplying the Benefits of Active Learning through Shared Reflection <i>McLeod, S.</i>	285

New Teaching Approaches to Assist Graduate and Doctoral Students with Learning the Academic Publishing and Career Development Process in Business, Public Administration, and Public Health <i>Burrell, D., Quinteros de Czifra, M., Finch, and Quisenberry, W.</i>	254
Not Easily Broken: Evaluating the Effectiveness of Mentoring 101 on Student Motivation and Performance Among At-Risk Freshmen <i>Yates, B., Holder, D., and Schoffstall, H.</i>	286
Observations of Instructors’ Influence on Student Attention in Computer-Infused Classrooms <i>Mohammadi-Aragh, J., and Williams, C.</i>	286
Online Tools to Support Written Reflection in the Professional Preparation of Undergraduates <i>Luke, N., Rogers, C., and Tracy, K.</i>	287
OpenDSA: Using an Active eTextbook to Teach Data Structures and Algorithms <i>Shaffer, C., Hall, S., Fouh, E., Breakiron, D., Elshehaly, M., and Karavirta, V.</i>	287
Organization of the Student Work with a Learning Expert System <i>Tverezovska, N., and Amelina, S.</i>	288
Peer Led Team Learning: Building Self-Confidence to Improve Student Performance <i>Villatoro, M.</i>	288
Phase III: Students’ and Faculty Members’ Self Perception of the Effects of an Interprofessional Simulation Activity on Interprofessional Skills <i>Jones, S., Staykova, D., Pouslen, C., Steer, D., Airey, D., and Nicely, S.</i>	255
A Phenomenological Study of an Interprofessional Healthcare Provider Oath <i>Garber, J.</i>	270
The Power of Real-World Learning Contexts <i>Hoeffferle, M.</i>	294
Practices and Perceptions of Teachers to Assessment of Learning: The Case of Mohammed First University <i>Kaaouachi, A.</i>	288
Pre-Service Teachers as Critical Action Researchers: A Model for Preparing Critical Multicultural Educators <i>McCloud, J.</i>	289
Preparing Teachers for 21 st Century Classrooms: Addressing the Needs of English Language Learners <i>Tilley-Lubbs, G., and Kreye, B.</i>	255
Professional Seminar: Valuing a One-Credit Course Through the Lens of Doctoral Students <i>Bhandari, T., Martin, J., MacDonald, B., and Turner, W.</i>	298
The Prospective Roles of University Education on the Light of Challenges of Knowledge Society <i>Gad, H.</i>	263
Psychological Issues in Interdisciplinary Research and Education <i>Farbod, E.</i>	255
Pyramid to Success Study Game: Helping Graduate Learners Achieve Excellence <i>Mauzard, N.</i>	256

Pythy: Leveraging Modern Web Technologies to Improve the Introductory Computer Science Experience
Tilden, D., Neidig, S., Allevato, A., and Edwards, S.289

Qualities of Exemplary Practice-Oriented STEM Publications
Mutcheson, R., Sutherland, M., and Creamer, E.256

Reducing Multicultural Intelligibility in the College Classroom
Osa, O......257

Reflective Teaching: Utilizing Brookfield’s Critical Incident Questionnaire to Obtain Student Feedback and Inform Pedagogical Practices
Brackette, C.290

Seeing the Connections: Zooming into Learning with Prezi
Whicker, J.257

Sense of Place in the Studio Environment
Kavousi, s., and Miller, P.258

Skill Shortages in the Labor Market: A Question of Occupational Silos?
Mukuni, J.258

Skills to Work in Global Platform: A Case Study Approach for Educating Engineers
Nandy, V., and Johri, D.290

SmartBDD: A High-Powered Version of Behavior-Driven Development for Education
Kamalakar, S., Maloo, A., and Dao, T.291

SoTL²: Research on Undergraduate Students as Institutional SoTL Researchers
Kinner, F......291

Spiritual Development and Education: A Spiritual Needs/Motivation/Volition Framework
Yocum, R., James, S., Staal, L., and Pinkie, E.292

A Strategy to Lessen University Classroom Non-Attendance and Its Impact on Student Performance
Ayers, K., and Poole, K.238

Student Characteristics Impacting the Four Theoretical Sources of Self-Efficacy
Locklear, T.259

Student Interpretations of Historic Costume Influences in Contemporary Dress and Design
Gaskill, L.259

Summer Anatomy Internships for Osteopathic Medical Students: Independent Cadaver Dissection
Wyeth, R., D’Amato, K., Danelisen, I., and Anstrom, J.292

Supporting College Students with Asperger Syndrome
Hassenfeldt, T., Gordon, H., and Scarpa, A.293

Talk Amongst Yourselves: Using the Practice of Backchanneling to Increase Student Engagement, Build Community, and Inform Instruction
Kassner, L.259

Teachers of Young Children as Teachers of Young Adults
Knight, D.260

Teaching Cultural Awareness and Acceptance Through Immersion Experiences <i>Brackette, C.</i>	260
Teaching Models of Narrative Analysis <i>Keinan, A.</i>	260
Teaching Science in Large Lecture Classes Compared to a SCALE-UP Class Environment <i>Chermak, J.</i>	261
Teamwork in the Humanities Classroom <i>Alexander, M.</i>	261
Technology and Innovative Thinking: Assessing Effective Pedagogical Practices <i>Farquhar-Caddell, D., and Amelink, C.</i>	293
Technology Orientation for Online Returning Professional Students <i>Scheckler, R.</i>	293
Theory X and Y Leadership in the Classroom <i>O'Keeffe, L.</i>	264
Today's College Students Are So Diverse, How Do I Teach Them Effectively? <i>Gould, H.</i>	264
Transforming our Teaching: Authentic and Strategic Learning with TPACK Activity Types <i>Poyo, S., Wilson, B., Carbonara, D., and Wilson, B.</i>	264
Transporting Literature to New Realms of Learning <i>Derrick, R., Cochran, D., and Combiths, K.</i>	265
Trying to Identify Just Which Teaching Practices Are Learning-Centered by Matching Faculty Members' Epistemological Beliefs to Their Teaching Practices <i>Polich, S.</i>	265
Unspeakable Subjects, Uniform Students: Rape and Ethnic Cleansing in the Non-Diverse College Classroom <i>Widdows, D., and Frusetta, J.</i>	266
Use of an Educational Social Networking Site to Promote and Teach "Teaching Presence" <i>Er, E., and Orey, M.</i>	295
The Use of Grounded Theory in Higher Education: From a Methodological Perspective <i>Sahbaz, S., and Yu, R.</i>	295
The Use of Team Taught Remote Science Modules to Engage Students <i>Rowe, H.</i>	295
User Preferences: Print vs E-books <i>Thiss, R., and McCandless, M.</i>	266
Using a Complex Dynamical Systems View of Marital Stability and Satisfaction to Assist Doctoral Students in Understanding and Protecting Their Marriage Relationships During the Doctoral Journey <i>Rockinson-Szapkiw, A., Spaulding, L., and Knight, A.</i>	267
Using Film Essays to Help Students Apply Theories of Social Interactions <i>Dunn, S.</i>	267

Using Art to Support Students' Job Search Success <i>Wang, M.</i>	267
Using Open Source Technologies in the Classroom to Assist with STEM Growth in Urban Schools <i>Dawson, M., Al Saeed, I., and Wright, J.</i>	268
Using Postmodern Feminist Pedagogies to Address Sensitive Topics in the College Classroom <i>Barrow, K., Austin, J., and Few-Demo, A.</i>	296
Using Social Cognitive Career Theory to Predict Female Student Intentions to Enroll in a STEM-Related Major: Psychometric Properties of a New Hybrid Instrument <i>Dew, D., Feldt, R., Bezy, R., Hruska-Hageman, A., Stehnova, J., and Bernstein, N.</i>	296
Using Symposium Teaching Strategies to Address Student Needs in a Multigenerational Classroom <i>Jakeman, R., and Swayze, S.</i>	297
Using Team-Based Learning to Teach Effective Communication and Collaboration <i>Vance, E.</i>	297
Utilizing Alumni to Enhance Virtual Collaboration and Cross Cultural Competencies <i>Charlton, R.</i>	298
What We Can Learn from High School Students About Teaching: Transferable Lessons for College Faculty <i>Burke, T., and Owen, S.</i>	268
What's Going On? : Culturally Relevant Pedagogy and International Students in Higher Education <i>Popova, D.</i>	298
Why Are My Kids So Bad?: Constructing a Freshman Ethic to Promote Success and Sanity in the College Classroom <i>Capello, S.</i>	299
Your Graduate Degree Should Mean Something!: Maintaining Rigor in a Fifth Year Preprofessional Masters Program <i>Blanks, B.</i>	299
Author Index.....	300

Wednesday

February 6, 2013

**Presentation
Sessions**

<http://www.cider.vt.edu/conference/>

Wednesday

February 6, 2013

Session 1

10:00-10:50 AM

Presentations:

Recoding and Reflection Using Web 2.0
Dredger, K., Martin, J., and Horst, P.

Building Professional Praxis Through an Electronic Portfolio Assessment
Howard, B., Gummerson, W., Guramatunhu-Mudiwa, P., Olson, G., Angel, R., and McGee, J.

*Taking the Plunge: Using Experiential Methods on the Journey
Toward Cultural Competency*
Blakeslee, S., and Arsenault, K.

Service Learning to Enhance Transformative Learning Experiences
Franz, R., Shrestha, S., and Fasnacht, E.

Implementation of a Clinical Education Model Across Academic Disciplines
Samdperil, G., and Wherley, V.

*Preparing Students for the Virtual Campus:
Expanding Our Definitions of College Readiness*
Hashmi, G., and Foster, M.

*Large Classroom Interactions: Evaluating How Clickers
Can Create a Seminar Experience for 300 Students*
Brians, C., Dounoucos, V., and Frye, C.

<http://www.cider.vt.edu/conference/>

Recoding and Reflection Using Web 2.0

Katie Dredger, Jenny M. Martin, & Paige Horst, *Department of Teaching and Learning, Virginia Tech*

Abstract: University instructors can differentiate instruction and offer choices and collaborative, interactive learning spaces for students as they construct conceptual understandings of course concepts. These varied strategies support students as they process understandings, recode through product creations, collaborate with classmates and professionals in the field, gain experience with oral language skills, and provide space for reflection. Such collaborative environments support students with varied knowledge and assist them in gaining confidence with New Literacies, offering safe learning spaces for students to constructively use digital tools such as blogs, wikis, and podcasts with the support of the learning community and traditional conferences.

Literature Review

Conceptual understanding comes from individual knowledge construction (Dewey, 1938). Teachers in higher education settings can work to support this knowledge construction by scaffolding new information in the form of what Miller (1956) calls “recoding” (p. 93). The application of new skills and knowledge is supported by Cognitive Flexibility Theory (Spiro, Coulson, Feltovich, & Anderson, 2004) that suggests that learners gain enduring understandings when material is presented in many ways and in many modes. This recoding is especially supported by the accessibility of Web 2.0 technologies (New London Group, 1996) in order to allow students to work in familiar learning spaces, such as social networking spaces. Secondary teachers have shared that students are engaged when New Literacies (Kist, 2005; Knobel & Lankshear, 2007) offer them space to collaborate and create to meet learning needs (Kajder, 2010; Richardson, 2009). Differentiated classrooms (Tomlinson, 2001) allow individualized learning environments that create both familiar learning spaces (Dredger, Woods, Beach, & Sagstetter, 2010; Moll & Greenberg, 1990) and support essential growth in content skill acquisition.

Goals and Objectives

Participants will look into a workshop (Atwell, 2003) atmosphere where students engage with content of their choice punctuated by mini-lessons and organized around common themes. Students choose their deadlines, thus differentiating the process of learning. Sharing their constructed knowledge in electronic form via a wiki, students experience a practical way to house files, projects, and notes so they can access them and continue to add to this shared knowledge approach well after the course, as students go into the field post graduation. Because of this individualized approach to knowledge instruction, students do not work in a lock-step fashion and as such, instructors assess learning informally through blog posts, tweets, and e-portfolio construction, while requiring face-to-face coaching sessions tailored for each student. Session participants will be given access to course wikis so that they can experiment with their ease of use. After the session presentation, participants will view the products of such a classroom. They will then hear of student perceptions of the process, as students do express some discomfort with the nontraditional approach. Instructors share how they have mitigated this discomfort so that students learn to appreciate the freedom to individualize their own instruction with a mentor in an apprenticeship atmosphere and how students rate instructors highly on Perceptions of Instruction instruments. Participants will be invited to ask questions to determine how this could be tailored to meet different content areas.

Description of the Practice

Teaching Adolescent Readers is a course that both models and explicates best practice pedagogy in the teaching of adolescents. Teacher candidates, MAED candidates at Virginia Tech, are immersed in a workshop approach where the only whole-class teaching occurs in short mini-lessons. Students are encouraged and supported in making a plan in their own inquiry, organized by text themes and genres, and then reading, exploring, and sharing their knowledge through wiki construction (see Figure 1), blogs, tweets, class sessions, and face-to-face conferencing. The final product of the course is a shared creation, a course wiki that students continue to access well after finishing the course. Three-hour classes are used for sharing and extending knowledge by all of the class members, not just the teacher. Work time for this learning usually comprises three hours outside of class and consists of project creation and publishing, reading, mining internet resources, and carefully chosen course texts that probe both theoretical and practical knowledge. Face-to-face coaching sessions, about 20 minutes in length, often occur off campus, at local

coffee shops, to encourage a congenial relationship and a shared understanding that knowledge is not held by professors alone.



Discussion

The issue of differentiated classrooms means honoring the learning styles of students in new ways. While this benefits the students individually, Cognitive Flexibility Theory suggests that the varied formats and styles of learning are more conducive to enduring understandings on the part of the learner. With the power of Web 2.0 technologies, students can access more knowledge that meets their needs, and the environment in the classroom becomes one of many teachers instead of just one.

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Building Professional Praxis Through an Electronic Portfolio Assessment

Barbara B. Howard, William M. Gummerson, Precious Guramatunhu-Mudiwa,
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Abstract: Working collaboratively, the faculty of a graduate program in education addressed the challenge of developing an electronic portfolio assessment grounded in the North Carolina Standards for Pre-Service School Executives to meet state licensing requirements for principals and provide a comprehensive assessment of desired program outcomes. The resulting portfolio consists of two parts: (a) sample assignments developed during courses with feedback from instructors; and (b) six action-research projects developed independently by students to address specific issues and problems within an actual school setting. The sample course assignment section allows students to select and showcase work completed throughout the program, which they believed was the most helpful in completing the required action research projects. The independently completed action research projects demonstrate comprehensive student learning. Through examination of portfolios, faculty can assess program objectives and make continuous efforts to improve program delivery. In this practice session, program faculty will share the principles and structure of the portfolio including: design of capstone assessments in coursework intended to support development of the culminating projects; assessment rubrics; electronic templates using the web-based TK-20 system of portfolio management; and exemplars of student outcomes. The principles and structure of this example of electronic portfolio can be applied to a variety of disciplines. Participants will explore this model of electronic portfolios for student assessment and program evaluation at both the graduate and undergraduate levels. Participants will engage in small group discussions and examine exemplars of student work presented in sample portfolios.

Literature Review

The use of electronic portfolios for assessing student learning at the graduate and undergraduate levels has become widespread among colleges and universities in recent years (Boggan & Harper, 2009). Content within the portfolios may vary from representing a collection of best work compiled over the course of a program to the culminating summative display of student learning (Buzzetto-More, 2010). Students report that portfolios based on professional standards with clearly written rubrics provide the opportunity to enhance learning within coursework as well as hone their skills for future roles (Hauser, Koutouzou, & Olson, 2005). This important use of electronic portfolios is further enhanced as it becomes a powerful tool to capture student work and enable greater faculty access for scoring (Rhodes, 2011).

Several models of web-based portfolios guided the development of the one to be presented in this session. Common elements drawn from these models include the following: full alignment with professional standards; specific templates for creating and displaying artifacts; clear scoring rubrics; and student opportunity to connect learning to practical application (Hauser, et al., 2005; Kimball, Milanowski, & McKinney, 2009; Redish, Webb, & Binbin, 2006).

Goals/Objectives

This session is designed to provide an overview of the development and structure of a standards-based program designed to prepare school administrators. The principles may be applied to a wider range of fields and disciplines at either the undergraduate or graduate level. As a result of participation in this session, participants will be able to:

- (1) Examine professional standards for their own fields within the context of their programs;
- (2) Examine rubrics designed to capture student application of standards-based practice;
- (3) Explore the use of capstone assessments in courses provided as a foundation for summative assessments by students;
- (4) Examine the application of research to practice; and

- (5) Explore the process for faculty collaboration in the development and implementation of standards-based portfolios for student and program evaluation.

Description

This practice session will provide an overview of the structure of a web-based electronic portfolio supported by TK-20 and designed by faculty to showcase student coursework as well as provide a summative assessment of student application of professional standards. A faculty panel will provide the research-base for the portfolio and insight into how each course reflects the standards-based practices required for successful completion of the summative projects. Participants will examine capstone assignment rubrics as well as the project rubrics designed to assess comprehensive student learning. Student exemplars will add to the discussion. Participants will be given the opportunity to share their own efforts in the development of similar structures of portfolios within the context of their own disciplines through small group interaction.

Discussion

Preparing effective professionals in any standards-based field requires cohesive programs that rely on supportive coursework with valid and reliable measures of student learning. Culminating summative assessments should accurately reflect the student's ability to ultimately meet the demands of their profession. Developing such coursework and portfolios is a challenge to faculty in both undergraduate and graduate fields. While this particular session focuses on school administration, the principles and complexity of issues may apply to a much wider range of programs and disciplines.

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Taking the Plunge: Using Experiential Methods on the Journey Toward Cultural Competency

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Abstract: This practice session will demonstrate how experiential assignments can aid in the development of cultural competency. By engaging the literature on this topic, students develop cultural knowledge and may even approach sensitivity. However, by executing specific assignments designed to illuminate racism, sexism, classism, heterosexism, and ableism, the students are thrust into a dynamic learning environment, enabling them to grapple with the concepts at a higher level.

Literature Review

In the past 25 years, accreditation standards by the Commission for the Accreditation of Marriage and Family Therapy Education (COAMFTE) have required programs to promote cultural competence by educating students about multiculturalism and issues of diversity (Laszloffy & Habekost, 2010). These requirements are typically met as students take a single course related to diversity (Laszloffy & Habekost, 2010), although there is some debate as to whether the content should be infused throughout the program or offered in a single course. Despite the fact that most programs require this training in some form, there is an absence of literature in the field regarding the development of these courses (Laszloffy & Habekost, 2010).

One article provides a model for the development of an experiential method for teaching concepts such as cultural competence, cultural awareness, and cultural sensitivity (Laszloffy & Habekost, 2010; Hardy & Laszloffy, 1995). These are critical components in the training and development of a culturally competent marriage and family therapist. Hardy likens the task of the educator as one who facilitates the journey, with milestones of knowledge and sensitivity occurring along the way (Hardy, personal communication). Using examples from the article, the lead presenter designed her Cultural Diversity class to model the suggestions given. The results of data collected during semi-structured interviews provide empirical support for an experiential method of teaching cultural diversity that enhances the student's journey toward cultural competence.

Goals and Objectives

After completion of the session, participants will be able to:

- Distinguish between cultural knowledge, cultural sensitivity, and cultural competency
- Recognize the impact of experiential exercises in learning these specific concepts
- Apply the theory of experiential learning to his or her own courses

Description of Practice to Be Exemplified

Based upon the literature about change in couples therapy and that corrective emotional experiences help couples recover in the here and now (Johnson, 2004), I will explain and demonstrate a truncated experiential exercise, or cultural plunge, designed to teach the concepts of cultural sensitivity, knowledge, and competency. I will present data from a qualitative research study designed to ascertain the degree of helpfulness these plunges provide to the learning environment. The study aims to answer the following research question: What is essential about the cultural plunges that enhances cultural competency? Finally, a current graduate student who has already taken the course will provide her feedback regarding the plunges.

Discussion

Preliminary results from the research study indicate the experiential methods were helpful in fostering cultural competency. Students indicated the reflexivity of the assignment forced them to engage with the concepts in a way they otherwise would not have. Processing their experiences in class was another way in which the students could build upon each others' knowledge and experience to provide a richer learning environment.

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Service Learning to Enhance Transformative Learning Experiences

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Abstract: Transformative Learning (TL) reaches beyond students because it encompasses faculty and staff by providing them with opportunities to seek new and unique educational approaches that may contribute to student learning and overall growth. This session will educate participants on what service learning is and help them understand its importance in relation to health and wellness. The session will also focus on service learning projects that have been proven to be an integral part of TL experience to help students see beyond the academic aspects and provide an opportunity to make an impact in their community. Participants will have an opportunity to explore a vast array of pedagogical strategies. The presenters will demonstrate effective ways to implement service learning and create TL experience in their course design.

Literature Review

Transformative learning is a process that involves cycles of cognitive dissonance, critical reflection, rational dialogue, and committed action that requires the student to take an active role in his or her learning (Glisczinski, 2011). Research suggests that students need multiple opportunities to enhance educational competencies and active learning experiences to help them promote growth in the area of focus (Massey-Stokes & Meaney, 2006). Providing students with a variety of learning avenues may result in their all-round growth and sustainability. Service learning gives students the opportunity to construct their own ideas and be an active part of their own learning. At the center of TL, which changes the way a learner understands and interacts with his or her world, is Mezirow's theory of reflectivity; reflective thinking which fundamentally changes a learner's perspective and experience (Wang & King, 2006). Research conducted by King (2004) suggested that learners who reflect on the meaning of what they are learning may also engage in evaluating their familiar values, beliefs, and assumption; therefore, strengthening their learning experience. Service learning programs are widely regarded as unique approaches in pedagogical strategy, which allow students to combine community service with academic discipline to achieve a meaningful learning experience (Nelson & Eckstein, 2008). In addition, service learning goes a step beyond community service, as it allows students to do things "with" others and not just "for" others (Seifer & Connors, 2007). Studies have also found that faculty who incorporated service learning in college health courses resulted in improved camaraderie among students and faculty themselves (Zinger & Sinclair, 2010). Therefore, it is important for educators to find ways to incorporate service learning into their courses and provide opportunities to engage students in a TL process.

Objectives

Upon completion of this session, the participants will be able to:

1. Understand and determine the importance of transformative learning experiences for their students.
2. How they can implement and evaluate service learning in their course design as a transformative pedagogy.

Description of Practice

This session will allow active interaction among the participants to explore transformative learning through the development of service learning projects. The presenters will talk about how TL experience is being implemented on their campus. The participants will be given a brief overview on current practices of TL approaches and how they have helped the students and faculty transform their learning experiences. They will also have an opportunity to learn about how they can implement service learning in their course design and evaluate its effectiveness on students' learning perspective.

Discussion

This presentation is based on the TL training provided to volunteering instructors of Healthy Life Skills classes from our campus. The researcher collaborated with the Center of Excellence and Transformative Learning Services in our university to provide free workshops to the instructors. The instructors are trained during the fall semester on TL approaches and asked to consider how they can redesign their course for the spring semester. The data is collected

using the scores from comprehensive exams administered to students of participating instructors Healthy Life Skills classes during the first week and last week of school. Only scores from students consenting to the study will be used for research evaluation. Also, the Student Perception of Instructional Effectiveness (SPIE) for instructor evaluation completed by students will be used to determine the effectiveness of different pedagogical approaches.

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Implementation of a Clinical Education Model Across Academic Disciplines

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Abstract: Academic programs in many allied healthcare professions, such as nursing (Benner, 1984) and physical therapy (Jarski, Kulig, & Olsen, 1990), have clearly articulated the benefits of clinical education in preparing their future professionals. One learning model of clinical education suggests, "...enhanced learning results from the active participation of the learner" (DeClute & Ladyshevsky, 1993). Academic disciplines that utilize internships, field work, co-op programs, or other off-campus, discipline-specific immersion experiences may benefit from implementing the core concepts imbedded in successful clinical education. During this session, participants will learn how to initiate a clinical education partnership, be introduced to clinical education "best practices", and understand how "learning" can occur outside the institution's classroom space. We will assist session participants in translating the information provided to their own disciplines/areas of expertise.

Literature Review

Effective clinical education models integrate a number of factors: the institution, the curriculum, the preceptor, the learner, and assessment procedures (Balla, 1990). Implementing a clinical education model into an academic program requires clearly defined objectives and expectations, committed preceptors to the learning process, adequate time for reflection and the appropriate clinical environment that allows for clinical competencies to be obtained.

Learning models used in clinical education vary, based on course goals and objectives, the preceptor to student ratio, the served patient population, physical space of the learning environment, and policies and procedures of the clinical education host site (DeClute & Ladyshevsky, 1993). Modifying the combination of these variables will influence both the learning process and learning outcomes (DeClute & Ladyshevsky, 1993, p. 683). In clinical education, "Learners are motivated by its relevance and through active participation" (Spencer, 2003, p. 591).

The preceptor guides clinical instruction and plays a vital role in creating a learning environment that allows students to develop clinical competencies and skills under the direct supervision of a practitioner (Myrick & Yonge, 2001; Ming, SU., Masodi, J., Kopp, M., 2000). Preceptors fosters "reflective practice" (Parker & Pitney, 2003, p. 46), which promotes retention of knowledge and skills (Radtke, 2008). This process is vital in authenticating the student's knowledge and creating best practices in the work setting (Mannix, Faga, Beale, Jackson, 2005).

Professional competency is: "the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served" (Epstein & Hundert, 2002, pg. 226). Students are able to model professional practice and clinical decision-making that ultimately enhances the professional domain. Defining and addressing clinical competencies is a cornerstone in well-executed clinical education.

Goals and Objectives for the Practice Session

This practice session will focus on:

1. Defining clinical education
2. Providing a framework for execution of clinical education
3. Vetting a preceptor (clinical instructor, fieldwork supervisor, etc....)
4. Preparing a student for clinical placement
5. Valuing clinical education from a learner's perspective

Description of the Practice to be Modeled

- A step-by-step plan will be provided, detailing successful strategies for researching, finding, and securing new clinical placement locations.
- Several common learning models will be discussed, highlighting the value of each as it pertains to clinical education
- The value of clinical education, from both a teaching and learning perspective, will be presented, the core traits of which are transferrable to any higher education audience member.
- We will attempt to help session participants answer the question: Is clinical education relevant to my department/discipline?

Discussion

Clinical education provides students the opportunity to transfer knowledge and skills learned in the classroom to the clinical setting. Defined as the “practice of assisting a student to acquire the required knowledge, skills, and attitudes in practice settings to meet the standards as defined by a professional accrediting board” (Rose & Best, 2005); The practice of clinical education enriches the student’s learning opportunity by creating an environment that fosters critical thinking and facilitates clinical decision-making through supervised clinical experiences. The value of clinical education is widely recognized by many health care professions, i.e.; nursing, athletic training, physical therapy, audiology, occupational therapy and medicine, as a valuable component of an academic curriculum (Radtke, 2008). Clinical competencies and skill-based proficiencies are obtained through supervised practice and mastery over time. The benefits of clinical education are not exclusive to the medical field and with proper organization and structure most academic programs would be able to incorporate an equivalent experience for their students.

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**Preparing Students for the Virtual Campus:
Expanding Our Definitions of College Readiness**

Ghazala Hashmi & Meg Foster

Quality Enhancement Plan, J. Sargeant Reynolds Community College

Abstract: For increasing numbers of students, online education blends readily and more effortlessly as an option for completing curricular requirements. Online courses, combined with on-campus options, provide the ease of flexibility and access: for such students, online learning simply represents another campus, albeit a virtual one. However, as faculty, administrators, and student support staff know all too well, current students' levels of preparation for online learning are varied and unreliable. Students who appear to be technologically savvy are often the least prepared for online learning. Such students, and the many individuals who work to support them academically, sometimes mistakenly regard technological aptitude as the primary qualification for online learning. While technology skills are certainly essential, the central characteristics that identify students as college ready must also come into play in institutional conversations about online readiness. Similarly, online readiness for all students must become integrated within the broader discussions about college readiness. The "new" world of online education is no longer so new or so innovative that it exists only at the margins of higher education. Increasing numbers of students seek out – and will continue to seek out – access to courses and degree programs through online opportunities. Ensuring that all students are given access to a broad spectrum of readiness tools is a core function of college preparatory programs. As J. Sargeant Reynolds Community College (JSRCC) implemented its Quality Enhancement Plan in 2010, its assessment efforts focused upon identifying skills and deficiencies in student preparation for online learning to develop student readiness support elements, student orientation activities, and faculty preparation for online teaching. The presentation identifies core assessment outcomes, new practices that have emerged from these assessment outcomes, and some of the impacts upon faculty, staff, and students.

Literature Review

Among the 2012 Virginia General Assembly's major revisions to the Standards for Accreditation for Public Schools was a critical diploma change that impacts not only secondary institutions and their students, but also those post-secondary institutions into which these students will be coming. The revision reads, "A student must successfully complete one virtual course, which may be non-credit bearing, to graduate with either a Standard or Advanced Studies diploma, beginning with students entering ninth grade for the first time in 2013-2014" ("Standards of Accreditation," 2012). Within six years, Virginia institutions of higher education can expect to see students who have increasing familiarity with opportunities to learn and develop skills through online classes and who will likely demand such opportunities as they pursue their higher education goals. As Virginia school systems move to meet this mandate, the definitions of college readiness will already broaden to include the parameters of competencies for online learning. However, the challenges for both secondary and post-secondary institutions lie within those elements of definition: what do we really mean when we identify students as "ready" for online learning? The discussions about online readiness are rich and varied. In their own attempts to define college readiness skills, Melissa Miskiewicz and Barbara Dray (2010) report on approaches that focus upon technology skills, information-gathering aptitudes, personal attributes, access to digital resources, and so forth. Researchers also point to necessary social skills needed for effective online engagement (Laffey, et. al., 2006). The emerging portrait of a college-ready student who is also ready for online learning is a complex one. The result of at least two decades of assessment and research on online learning and student success in online education points to a broad spectrum of activities, resources, and support structures that need to be developed or put within accessible reach for learners within distance classes.

Methodology

The goals and objectives for this practice session are as follows:

- 1) To provide attendees with an overview of current national definitions of college readiness, especially as they pertain to online learners. Presenters will discuss the ways in which these definitions and perceptions of readiness have evolved through assessment practices that have been conducted nationally.
- 2) To share with attendees the results of J. Sargeant Reynolds Community College's internal assessments of student readiness skills and student orientation needs. Presenters will provide internal data that have emerged from the institution's implementation of SmarterMeasure, its development and dissemination of an Orientation to Learning Online module, and its assessment of targeted student learning outcomes in information literacy.
- 3) To provide attendees with the resources that they need to develop their own institutional approaches to orientation for online learners, online support resources, and assessment activities. Over the past three years, JSRCC has developed several online resources and activities that can be replicated at other institutions.

In addition to providing the session's participants with both a general and an institution-specific overview of how to prepare students for online learning and engagement, the presenters will provide handouts and guidelines for participants to use in direct application within the context of their own institutional efforts to assess student readiness and to give students meaningful support for online learning. The session includes ample opportunity for participants to engage in direct discussions with the presenters and with each other.

Discussion

Any discussion about college readiness skills must now include direct and specific conversations about preparing students effectively for success within the online classroom. Such discussions have focused, until quite recently, upon technology skills and technology access. However, such a narrow focus in the definition of student readiness for online learning overlooks the clear data that is emerging at both national and local levels: student readiness for online education encompasses a broad spectrum of concerns that range from personal attributes to institutional support structures to information gathering abilities. The approach being implemented at JSRCC acknowledges these broader definitions and uses both internal and external data to develop, embed, and disseminate a full range of readiness activities and assessments to increase student success within online education. This presentation focuses upon those activities and resources that have evolved over the course of three years of concentrated efforts in the area of online learning for community college students.

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Large Classroom Interactions: Evaluating How Clickers Can Create a Seminar Experience for 300 Students

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Abstract: In recent years, technology has gained a firm foothold in higher education classrooms. The student response system (i.e., clickers) is among the most common teaching technologies incorporated into classrooms today (Immerwahr 2009; Winograd & Cheesman 2007). These personal devices permit students to contribute their individual opinions and quiz responses in real-time during class. Given clickers' growing popularity over the last decade, particularly among those teaching large enrollment courses, dozens of studies in fields ranging from biology to physics to political science have sought to evaluate clickers' effects on learning (e.g., Beavers 2010; El-Rady 2006; Salemi 2008; Stuart, Brown, & Draper 2004; Winograd and Cheesman 2007). Previous research generally falls into one of three categories: (1) examples of pedagogical techniques, (2) user perception studies, and (3) quasi-experimental tests of knowledge change. Nearly every study identifies benefits from incorporating clickers into the classroom; however, the causal link between "clicking" and these claimed benefits is left unexamined. To fill this void, this paper explicitly studies competing hypotheses, each seeking to explain learning gains from clicker use. Studying this relationship in large classes (e.g., several hundred students), we find that clickers improve students' performance through a number of mechanisms: (1) enhanced pre-class preparation, (2) more consistent class attendance, (3) increased classroom participation and attention, (4) the opportunity to practice timed testing, (5) signaling high-priority course content, and (6) "on the fly" formative assessment of student knowledge. These processes appear to operate simultaneously and interactively, although in different intensities for different students.

Literature Review

In recent years, technology has gained a firm foothold in higher education classrooms. The student response system (i.e., clickers) is among the most common teaching technologies incorporated into classrooms today (Immerwahr 2009; Winograd & Cheesman 2007). These personal devices permit students to contribute their individual opinions and quiz responses in real-time during class. Given clickers' growing popularity over the last decade, particularly among those teaching large enrollment courses, dozens of studies in fields ranging from biology to physics to political science have sought to evaluate clickers' effects on learning (e.g., Beavers 2010; El-Rady 2006; Salemi 2008; Stuart, Brown, & Draper 2004; Winograd and Cheesman 2007). Previous research generally falls into one of three categories: (1) examples of pedagogical techniques, (2) user perception studies, and (3) quasi-experimental tests of knowledge change. Nearly every study identifies benefits from incorporating clickers into the classroom; however, the causal link between "clicking" and these claimed benefits is left unexamined.

Methodology

To address the causal mechanism void in the literature, this paper explicitly studies several competing hypotheses, each seeking to explain exam score improvement (or even learning gains) from clicker use. Exploring this relationship in large classes (i.e., 80 to 300 students), this study empirically examines these potential mechanisms using a range of data: quantitative and qualitative student surveys, experimentally comparing (individual-level) in-class clicker question performance to exam question performance, and focus group responses.

Results

We find that clickers improve students' performance through several mechanisms: (1) enhanced pre-class preparation, (2) more consistent class attendance, (3) increased classroom participation and attention, (4) opportunity to practice timed testing, and (5) signaling high-priority course content. Additionally, these processes appear to operate simultaneously and interactively, although with different intensities for different students, depending upon a student's initial motivation level.

Table 1: Clicker Quizzes Build Exam Confidence

Do the clicker quizzes help you feel more confident when taking exams in this course?

Yes		93%
	(262)	
No		7%
	(19)	
Total		100%
	(281)	

Table 2: Clicker Quizzes Aid Studying

Have the in-class clicker quizzes helped you to study in this class?

Yes		96%
	(273)	
No		4%
	(10)	
Total		100%
	(283)	

Discussion

Broadly, we find that most students in a course using clickers (1) place greater value on attendance and therefore retain more knowledge to use on exams, (2) are more likely to look at the readings before class, and (3) demonstrate greater course satisfaction. Using clickers also appears to reduce student distractions in a large lecture course, due to the need to pay attention to frequent, interactive questioning.

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Wednesday

February 6, 2013

Session 2

11:10-12:00 PM

Presentations:

*Personal Learning Environments, Social Media, and Self-Regulated Learning:
A Natural Formula for Connecting Formal and Informal Learning*
Dabbagh, N., and Kitsantas, A.

*Surveying the Landscape of Tools that Facilitate Collaboration, Online Communication
and Project Development*
Terry, K. P.

Teaching with the Power of Reflective Thinking
Parkes, K.

Mediating Competing Values Among Students in Service-Learning Courses
James-Deramo, M., Axsom, D., Ovink, S., Pendleton, L., and Collins, K.

*All Problems Are Not Created Equal: Intentional Design of Learning Experiences
Grounded on an Innovative and Versatile Problem-Based Learning Model*
Pierrakos, O., Nagel, R., Watson, H., Anderson, R., Pappas, E., Gipson, K., Barrella, E.,
Karabelas, J., El-Adaway, I., Yazdani, S., and Kander, R.

*Development of Students' Ability to Assess Information
Through Ranking of Online Learning Resources*
Tvezovska, N., and Tamavska, T.

Developing Empowering Educational Experiences Through Creative Practices and Teacher Research
View, J., DeMulder, E., and Stribling, S.

A Project-Based Simulation Model for Construction Education
Goedert, J., Rokoeisadabad, S., and Pawloski, R.

<http://www.cider.vt.edu/conference/>

Personal Learning Environments, Social Media, and Self-Regulated Learning: A Natural Formula for Connecting Formal and Informal Learning

Nada Dabbagh, *Learning Technologies, George Mason University*
Anastasia Kitsantas, *Educational Psychology, George Mason University*

Abstract: A Personal Learning Environment or PLE is a potentially promising pedagogical approach for both integrating formal and informal learning using social media and supporting student self-regulated learning in higher education contexts. This paper (a) reviews research that support this claim, (b) conceptualizes the connection between PLE, social media, and self-regulated learning, and (c) provides a three-level pedagogical framework for using social media to create PLEs that support student self-regulated learning. Implications for future research in this area are provided.

Literature Review

The 2010 EDUCAUSE Center for Applied Research (ECAR) study of undergraduate students and information technology revealed that students' use of social media has steadily increased from 2007 to 2010 and that college students are integrating social media in their academic experience both formally and informally (Smith & Caruso, 2010). Additionally, there is strong evidence that social media can facilitate the creation of Personal Learning Environments or PLEs that help learners aggregate and share the results of learning achievements, participate in collective knowledge generation, and manage their own meaning making. Overall, the research suggests that social media are being increasingly used as tools for developing formal and informal learning spaces or experiences that start out as an individual learning platform or PLE, enabling individual knowledge management and construction, and evolve into a social learning platform or system where knowledge is socially mediated (Dabbagh & Reo, 2011; Johnson, Adams, & Haywood, 2011; McLoughlin & Lee, 2010). The research also suggests that social media use in higher education is enabling the creation of PLEs that empower students with a sense of personal agency in the learning process. More specifically, a PLE can be conceptualized as a cognitive space that has cognitive characteristics such as student investment in their studies, sense of efficacy, and motivation (Underwood & Banyard, 2008; Valjataga, Pata, & Tammets, 2011). However, in order to successfully leverage social media towards the creation of PLEs, students must acquire and apply self-regulated learning skills because PLEs are built bottom-up starting with personal goals, information management, and individual knowledge construction, and progressing to socially mediated knowledge and networked learning (Dabbagh & Reo, 2011; Turker & Zingel, 2008). Kitsantas and Dabbagh (2010) suggest that social media have pedagogical affordances that can help support and promote student self-regulated learning by enabling the creation of PLEs and that the relationship between PLEs and self-regulated learning is interdependent and synergistic requiring the simultaneous, progressive, and transformative development and application of self-regulated learning skills using social media.

Goals and Objectives of Practice Session

The goal for this practice session is to describe how PLEs can serve as platforms for both integrating formal and informal learning and fostering self-regulated learning in higher education contexts.

Description of Practice to be Exemplified

To assist higher education faculty and instructors in scaffolding student self-regulation skills in the creation of PLEs we developed a pedagogical framework for social media use based on the levels of interactivity that social media tools enable. These levels are: (1) personal information management, (2) social interaction and collaboration, and (3) information aggregation and management (Dabbagh & Reo, 2011; Kitsantas & Dabbagh, 2010). Table 1 provides examples of how instructors can guide students' use of social media at each level of the framework. The goal of this framework is to inform college faculty and instructors how to engage students in a transformative cycle of creating PLEs that support self-regulated learning. In doing so, PLEs can become effective pedagogical tools that influence students' cognitive processes in addition to serving as vehicles for informal learning (Turker & Zingel, 2008).

Table 1. A Framework for Using Social Media to Support Self-Regulated Learning in PLEs

	(Level 1) Personal information management →	(Level 2) Social interaction and collaboration →	(Level 3) Information aggregation and management →
Blogs	Instructor encourages students to use a blog as a private journal to set learning goals and plan for course assignments and tasks	Instructor encourages students to enable the blog comment feature to allow for instructor and peer feedback enabling basic interaction and sharing	Instructor demonstrates how to configure a blog to pull in additional content and how to add the blog to RSS aggregation services
Wikis	Instructor encourages students to use a wiki as a personal space for content organization and management	Instructor encourages students to enable the wiki's collaborative editing and commenting features for feedback	Instructor demonstrates how to view a wiki's history to promote student self-evaluation of their learning across time
Google Calendar	Instructor encourages students to use Google Calendar for personal planning	Instructor encourages students to enable the calendar sharing features to allow feedback and collaboration to complete course tasks	Instructor demonstrates how to archive personal and group calendars to promote student self-evaluation regarding time planning and management
Social Networking Sites	Instructor encourages students to create an academic and career profile on LinkedIn	Instructor encourages students to connect to online communities related to their professional goals	Instructor asks students to engage in self-reflection with the goal to restructure their profile and social presence

Discussion

A PLE can be entirely controlled or adapted by a student according to his or her formal and informal learning needs, however not all students possess the knowledge management and the self-regulatory skills to effectively use social media in order to customize a PLE to provide the learning experience they desire. Teaching students to become effective self-regulated learners may help them acquire basic and complex personal knowledge management skills that are essential for creating, managing, and sustaining PLEs using a variety of social media. Although this three level framework has not been tested empirically, it is hypothesized that as students engage in a self-oriented system of feedback with the help of the instructor and their peers they become empowered to create effective and sustainable PLEs to achieve desired learning outcomes and enrich their learning experiences.

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**Surveying the Landscape of Tools that Facilitate Collaboration, Online Communication
and Project Development**

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As the world of web 2.0 continues to explode and interactive online tools proliferate, the possibilities presented to educators to engage students in pedagogically relevant and engaging online learning activities are endless. During this workshop, participants will dive into exploring the vast array of technologies that can facilitate collaborative learning activities, online communication, and rich media project development. Tools ranging from glogs to hangouts to 3D gaming and simulation applications will be presented as possibilities to enhance student engagement. Participants should be prepared to engage in conversations related to the pros and cons of using specific tools and should be ready to sign up for accounts and explore.

Teaching with the Power of Reflective Thinking

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Abstract: This session will report findings from a research study undertaken to understand Web 2.0 methods and consequences of engaging students in types of reflective practice such as Blogging, Vlogging and Collaging (Calandra, Gurvitch, & Lund, 2008; Gomez, Sherin, Griesdorn, & Finn, 2008; Kajder & Parkes, 2012; Maclean & White, 2007; Martindale & Wiley, 2005; Rhine & Bryant, 2007). Additionally, this presentation will share successful Web 2.0 strategies and best practices in higher education pedagogy, namely the pedagogical processes that can promote student thinking and ownership of learning. Objectives for participants: they will be able to recognize reflective practice and engage in creating prompts for their own classroom settings to promote reflective practices in students. They will be able to utilize best practices for assessing reflective practice exemplars.

Literature Review

Teacher educators have embraced reflective practice (e.g., Dewey, 1933; Fenstermacher, 1994, Freese, 1999; Schön, 1983, 1987; Van Manen, 1977) because of its reported ability to improve the preparation of teachers (Larrivee, 2008; Hume, 2009; Rickards et.al, 2008; Sparks-Langer et.al, 1990). This emphasis has been observed in discipline-specific teacher education (Campbell, Thompson & Barrett, 2010; Chaffin & Manfreda, 2010; Conkling, 2003; Sheldon & DeNardo, 2004) however, Web 2.0 reflective practices are somewhat elusive in the literature (e.g., Bauer & Dunn, 2003; Berg & Lind, 2003) and their perceived potential for developing critical and creative thinking are somewhat under-explored.

Goals and Objectives for this Session

Participants will firstly understand the “why” of this session. Research will be explained to illustrate the basis of pedagogical decisions made by the presenter to use and incorporate reflective practices in her curricula. Second, participants will see concrete examples of several modalities of reflective practice, including but not limited to blogs, vlogs, collages, and ePortfolios. Third, participants will be asked to work in groups on specific tasks to create prompts and brainstorm ideas for utilizing reflective practice in their own classroom settings.

Description of the Practice to be Exemplified

The author asks her students to write reflectively about their practical experiences, in K-12 schools. The Blog tool is the first tool to be examined - WebLogging. Specificity of prompts will be exemplified. A wider platform using a variety of modalities will also be illustrated, Wordpress. Students are also asked to VLog (video log). The Vlogging is an activity where they video themselves talking reflectively about their learning and it yields more facial and body gesture information about what students believe about their own knowledge and experiences. The third reflective tool used is the Video Collage. The Video Collage is a type of meta-reflection where students gather clips of themselves in practice (teaching in K-12 schools) and then they make one Collage product using the clips from an entire month, to visually illustrate their pedagogies and the products of how they are transferring teaching theory to their actual teaching practice. This gives a deeper level of reflection, as they must make meaning across the clips and across a whole month, rather than just one week.

Discussion

This session will suggest that higher education faculty should be able to introduce reflective practice to almost any classroom setting and that it helps for them to be comfortable with wider technological expertise if their students' reflective practices are to improve across several modalities. Additionally, regular guidance and feedback for students continues to be important for quality reflection, particularly with the use of rubrics and other tools. The role of the multiple modalities in this context appears to be quite powerful, particularly in developing a ‘community’ of learners within cohorts when peer evaluation is employed. The longitudinal research findings of the author regarding reflection support and justify the use of distinct Web 2.0 reflective practices with students.

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Mediating Competing Values Among Students in Service-Learning Courses

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Abstract: Service-learning courses that provide students with hands-on involvement with complex social issues, raise the potential for both conflict and dialogue. Students are asked to engage with issues academically, as well as personally, in ways that touch upon their core values and beliefs. This session addresses the concern of how to mediate conflicts related to competing values that may arise in the context of a service-learning course and, in the process, develop the skills and competencies of civil public discourse among undergraduate students.

Literature Review

This presentation emerges from a Faculty Study Group exploring curricular strategies for teaching service-learning in a way that produces democratic outcomes. The Study Group was structured around a set of readings from the book, *Democratic Dilemmas of Teaching Service-Learning, Curricular Strategies for Success*, Christine M. Cress, David M. Donahue, and Associates, Stylus Publishing: Sterling, VA, 2011.

Goals and Objectives

The goal of this session is to demonstrate how conflict can be transformed into dialogue in courses that engage students with critical and potentially polarizing social and political issues. We will achieve this goal through the following objectives:

1. Recognizing that our choice of curricular strategies, especially the decision to use service-learning, is inherently political and needs to be acknowledged as such in the classroom.
2. Clarifying that the desired civic outcomes of service-learning courses should increase the skills of democratic engagement rather than promote a particular social or political perspective.
3. Articulating the criteria for democratic engagement outcomes, and how faculty can work toward these outcomes.
4. Using case studies from faculty teaching Sociology, Psychology, and an Engineering Professionalism courses who have addressed democratic dilemmas in their classrooms.

Praxis

The teaching practice at the center of this session is that of service-learning. More specifically, the session addresses a model of service-learning that (a) requires all of the students in a particular class to participate in a community service project, and (b) asks students to select a project that addresses a social issue. The purpose of the session is to look more closely at the assumptions we bring to this service-learning design—both the potential irony of ‘requiring’ students to volunteer, and the potential conflicts that may emerge in the classroom as students engage in work that touches on the ‘freedoms’ fundamental to our democracy—including, freedom of religion, freedom from discrimination, freedom of political choice, and freedom to dissent. The session focuses on the role of the professor in evoking substantive discussion around these topics, demonstrating the habits of dialogue, listening, and perspective taking, and mediating conflict so that it is a source for learning and continued engagement.

Discussion

James-Deramo will begin by introducing the session’s goal of conflict transformation in issue-driven service-learning courses, with emphasis on the underlying assumptions connected to objectives 1 and 2 (above). She will then present a rubric for desired civic outcomes and invite the participants to add or revise the criteria on this rubric. The introductory remarks and rubric exercise will establish the ground for the case study discussions that follow. Axsom, Ovink, and Pendleton will each present a case study from their own classroom experiences that include a

specific incident, their strategies for constructively addressing the incident, and an analysis for how these strategies served to transform conflict.

Collins will facilitate audience responses to the case studies, as well as call forth examples from the participants' own experiences. In the event that the audience is not forthcoming with examples, Collins will have samples from the *Democratic Dilemmas* text for discussion.

When the participants leave this session, they will take away a rubric of desired civic outcomes, and an annotated bibliography for further reading and reflection.

All Problems Are Not Created Equal: Intentional Design of Learning Experiences Grounded on an Innovative and Versatile Problem Based Learning Model

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Abstract: There has been much criticism about undergraduate education, and particularly STEM education, not focusing enough on problem solving. To improve education, it is essential that curricula promote high levels of cognitive development by exposing students to authentic problems. Problem-based learning (PBL) is a student centered pedagogy that offers a strong framework upon which to teach students essential problem solving skills. For many educators, though, PBL refers mainly to open-ended problems that incorporate team-based collaborative learning. Most of us acknowledge, though, that not all problems are created equal and that different problems lead to different learning outcomes. Educators should intentionally design authentic learning experiences that expose students to all types of problems – well-defined to ill-defined, simple to complex in terms of knowledge integration, individual to team-based – so that students learn to be adaptive problem solvers. As part of a National Science Foundation effort, we present the development, implementation, and assessment findings from a novel PBL model.

Literature Review

Problem solving has been defined as “any goal-directed sequence of cognitive operations” (Anderson, 1980, p. 257) and according to Jonassen (2000), “problem solving is generally regarded as the most important cognitive activity in everyday and professional contexts. . . . However, learning to solve problems is too seldom required in formal educational settings, in part, because our understanding of its processes is limited”(p. 63). Problem-based learning (PBL), having historical foundations in medical education (Barrows, 1985; Barrows and Tamblyn, 1980), is a powerful student-centered pedagogy that allows all students, particularly STEM students, to learn these essential problem solving skills. A large body of literature highlights the successes of PBL in many domains and in support of many student learning outcomes (e.g., problem solving, critical thinking, motivation, knowledge retention), and showcases PBL as a pedagogical vision rooted in practical experiences (Du, Graaff, & Kolmos, 2009; Woods, 1994). PBL encompasses not only a wide range of practices, but also a wide range of implementation models (Du et al., 2009; Kolmos et al., 2009; Ravitz, 2009; Savery, 2006). Definitions of what constitutes PBL problems also vary widely (Du et al., 2009; Kolmos et al., 2009). For researchers, there is an interest in better understanding the nature of PBL experiences because not all problems are created equal. Problems have been described in terms of a) ill-defined to well-defined and routine to non-routine (Mayer and Wittrock, 1996), b) well-structured to ill-structured (Jonassen, 2000), c) external factors such as complexity, structuredness, and abstractness, and d) internal factors which are inherent to the problem solver (Smith, 1991). Understanding how aforementioned problem characteristics vary is essential for demystifying the process of learning through PBL and through traditional pedagogical methods.

The JMU PBL model is grounded on PBL theory and designed for flexibility and multidimensionality of PBL experiences conceptualized by educators and ultimately integrated in undergraduate classrooms. The underlying dimensions of the JMU PBL model are structuredness, complexity, and team structure (Pierrakos et al, 2008). *Structuredness* pertains to how well a problem statement is defined as well as how well the process is structured in terms of the methods and analysis used. *Complexity* pertains to the amount and integration of domain knowledge required to solve the problem, the intricacy of the solution path, etc. In a sense, complexity provides insight into the cognitive load imposed on the problem solver. *Group structure* pertains to the level of collaborativeness.

Goals and Objectives

The four overarching goals for the session are to:

- (1) Provide background and discuss problem-based learning (PBL) theory and problem solving contexts.

- (2) Describe the development, classification, and assessment of the innovative JMU PBL model.
- (3) Generate a collection of peer developed ideas on the development, classification, and assessment of a variety of problems for both lower-level and upper-level undergraduate courses.
- (4) Provide attendees resources to develop, classify, and assess a variety of PBL activities in their courses.

Description of Practice

During this learner-centered session, we will highlight some of our current research on the development, implementation, and assessment of the innovative JMU PBL model (Pierrakos et al. 2008). Examples of PBL experiences in a variety of courses across curricula and across several disciplines will be provided. The agenda is:

- (1) *Introduction* - Brief presentation on PBL theory, intentional design of learning experiences and research findings. Presentation followed by a brief Q&A. [10 min]
- (2) *Reflection and Discussion* - Small-group reflection and large-group discussion of the variety of problems incorporated in undergraduate courses using a problem classification framework. [10 min]
- (3) *PBL Template* - Presentation to share the PBL classification framework (in the form of a template) developed by the JMU PBL research team, comprised of engineering educators and assessment specialists. Both a blank template and several filled-out will be provided. Presentation will be followed by a brief Q&A. [10 min]
- (4) *Reflection and Discussion* - Small-group reflection and large-group discussion on developing a variety of PBL experiences using the problem classification framework and template. [15 min]
- (5) *Wrap-up summary and Q&A*. [5 min]

Discussion

A key outcome of this session is dissemination of PBL materials. The session facilitators will provide the tools on developing, classifying, and assessing a variety of PBL experiences in the undergraduate classroom. The potential impacts of methods and tools could have transformative implications for undergraduate education.

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Development of Students' Ability to Assess Information Through Ranking of Online Learning Resources

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Abstract: The continuous development of computer technology, extremely rapid growth of information accumulated by mankind, and constant changes in the way of its transmission and storage requires adaptation of education system for the requirements of labor market. The character of modern stage of information technology development is radically changed nature of work. One of the ways to make the graduates competitive in the labor market of the Global Information Society is to optimize the use of available information technology in the educational process. The pace of information technology development is so fast that the priorities in education have been decisively turned from getting knowledge to getting professional skills and abilities. Ability to assess, rank and verify reliability of information coming constantly in a huge flow is of vital importance; as well as its correct transmission and storage. One of the ways of developing the ability to assess information through ranking of online learning resources is described. It will assist with development of at least four core abilities (Mielke & Weber, 1989): working productively, working cooperatively, communicating clearly, and thinking critically and creatively. As the method has been put into practice recently, it is not feasible to provide any conclusive data and evidence. However, students recognize that ranking information greatly helps them in their studies.

Background

The continuous development of computer technology, extremely rapid growth of information accumulated by mankind, and constant changes in the way of its transmission and storage requires adaptation of education system for the requirements of labor market. The time when computers were primarily used to help a teacher to fulfill specific pedagogical tasks (for example, to demonstrate some of the physical processes by means of computer simulation) is still fresh in our memory. Great efforts were made to teach and learn the basic computer principles. Then, in 1990s, a number of information literacy concepts were introduced. Information literacy – the ability to find and use information – was called a “keystone of lifelong learning” (Byerly & Brodie, 1999).

The character of modern stage of information technology development is radically changed nature of work. Working places are becoming completely automated. As skills work best in circumstances in which they were formed, modernization of higher education is of vital importance. But there still exist a lot of countries (and Ukraine is one of them) where government contribution to university funding is not enough to compete with the universities using recent innovations like, for example, high tech virtual practice environments or clickers.

So, how can we make our graduates competitive in the global labor market? One of the ways in this area is to optimize the use of available information technology in the educational process. The pace of information technology development is so fast that the priorities in education have been decisively turned from getting knowledge to getting professional skills and abilities. Ability to assess, rank and verify reliability of information coming constantly in a huge flow is of vital importance; as well as its correct transmission and storage.

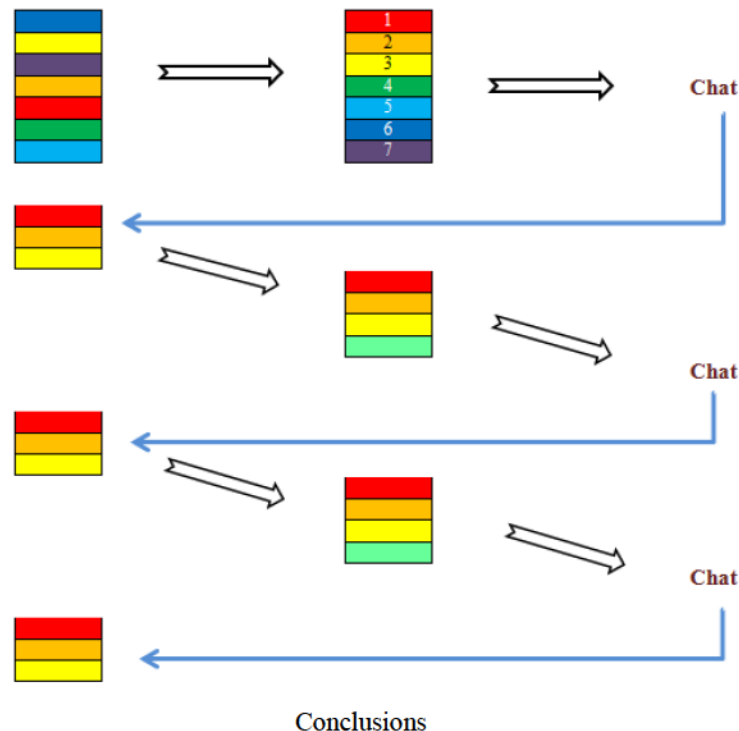
Methodology

To exemplify the way of developing the mentioned skills, we will describe the process of assessing Web-based learning resources at the SharePoint Online team site to learn English pronunciation. The Internet has more than enough resources, but how to find the best ones? It can be tricky to find online information that is relevant, efficient and goal-appropriate. Or it might take too much time if a student does it alone. We offer the following scheme:

1. Initially, the teacher offers several online learning resources on the topic (7 in the example) at his/her option (can be based on the public surveys).
2. The students assess the resources and range them in compliance with the criteria given by the teacher.
3. As a result, not more than top three resources are left. Students substantiate their choice in the chat window.

4. Throughout the course of study, when a student or the teacher finds another noteworthy online resource, he/she adds it to the current list.
5. Again the students leave only three of the resources and provide clear and concise reasoning in the chat window.
6. The process can be repeated as many times as necessary.

This work can be continued for years with different groups of students. It will assist with development of at least four core abilities (Mielke & Weber, 1989): working productively, working cooperatively, communicating clearly, and thinking critically and creatively.



1. The objective – development of the ability to assess information – is achieved if it is done regularly with different topics students learn.
2. The constantly updated list of online resources makes it possible to use only the best ones, protecting students from wasting time; and therefore freeing up some time for effective training.
3. It also reduces the useless stay in front of the computer, which will greatly contribute to the preservation of teacher's and students' health.
4. Developing ability to manage information is critical to prepare students for the 21st century workplace.

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Developing Empowering Educational Experiences Through Creative Practices and Teacher Research

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Abstract: There is typically no expectation of creativity in the context of graduate teacher professional development programs, yet many constructs demand that teachers exhibit considerable creativity in curriculum and instruction. The challenge then for teacher educators is to support each learner's individual growth toward greater cognitive complexity through creative endeavors. The purpose of this session is to illustrate the ways in which a teacher research process supported in-service classroom teachers to incorporate empowering learning experiences into their P-12 classrooms. These experiences, which included the use of the arts to nurture teachers' own creative processes, led to the empowerment of students, their families, and the teachers themselves. Through their classroom research, teachers assessed the need for change, implemented a change, studied the results, raised new questions, and cycled back through the process. The teachers discovered empowering educational experiences, a deeper understanding of difference, particularly race and culture, and improved instructional practices which led to more effective and creative classroom practices and communities.

Literature Review

School districts often provide professional development opportunities where an "expert" disseminates information regarding effective strategies for teaching content and skills. Yet, teachers often find that the ideas do not necessarily meet their needs or those of their students. We contend that four key components are missing from this traditional model of professional development: critical reflection, relationships, empowerment and creativity. These concepts are cited as critical components for student learning (e.g., see Connery, John-Steiner, & Marjanovic-Shane, 2010; Cummins, 1996/2001; Meier, 1995; Noddings, 1992, Oakes & Lipton, 2003), and we argue that they are also critical components for teacher professional development. As faculty colleagues, the authors wondered how teacher inquiry and arts-based educational research might lead teachers to a greater appreciation for the complex, interrelated factors that contribute to an individual's orientation toward learning and might transform their thinking and their teaching practice (Darling-Hammond, 1996; Ritchie & Wilson, 2000). Our thesis was that to change teacher practice, teachers must conduct research that includes engaging in an explicitly creative process; we hypothesized that they might develop awareness of how to change their practice to offer creative exploration in their own classrooms.

Creativity offer tools for understanding research outcomes and enhancing pedagogy. Among the creative practices we explore are inquiry, visual arts, poetry as data analysis, and other forms of arts-based educational research. Critical reflection, relationships, and empowerment are at the core of teacher research, creating an extremely powerful model of professional development that helps to sustain teachers in their work in classrooms and schools. As teachers develop a critically reflective stance that drives informed action, and as they forge supportive relationships in their classrooms and schools, a sense of agency and self-efficacy develops as well; these are the conditions under which individuals begin to feel empowered (Cummins, 1996/2001). Several theorists help us to construct an understanding of "empowerment" and of "creativity." Cummins (1996/2001) describes empowerment in schools as a process of "negotiating identities" through interpersonal relationships, a reflective process that leads individuals to create their own self-image and sense of self. In order to lay the groundwork for empowerment, individuals need opportunities to connect with others in meaningful ways (Bronfenbrenner, 1986) and to remain "in community" in order to create lasting change (McKnight 1987; Mondros & Wilson 1994). Arts-based educational research (ABER) is the use of the elements and practices of the arts to inform our understanding of education. Eisner (2008) asserts that ABER works to "apply the arts in some productive way to help us understand more imaginatively and more emotionally problems and practices that warrant attention in our schools" (p. 18). Equally important is the evidence that the arts are necessary for children's intellectual development (e.g. Connery, John-Steiner, & Marjonovic-Shane, 2010) and classroom teachers are important conveyors of this message. Taking these ideas into account, we reasoned that an empowerment process might be set in motion as teachers engage in teacher research. As teachers come to better understand their praxis, they may gain a greater appreciation for the value of considering and responding to the diverse needs of their own students and may improve their practice in ways that empower their own students.

Methodology

The researchers studied their own teaching and the subsequent learning of in-service P-12 teachers enrolled in a non-traditional, cohort-based master's program at a large university on the east coast. The teachers were engaged in activities that developed teacher qualitative research skills and creativity: taking field notes, interviewing students, gathering data in their classrooms, and using arts-based educational research to analyze data to better understand the learning processes and needs of their students. The teachers then conducted their own teacher research projects. Throughout this process, the university faculty gathered data on the teachers' development as teacher researchers, including teachers' written work (i.e. course projects, research memos, reflective feedback) as well as observations/field notes on class days, to determine the impact of the teacher research process on the teachers' classroom practices as well as on their sense of self.

Results

Through engagement in the teacher research process, teachers gained voice; they began to trust what they knew about providing appropriate instruction to their students despite the pressures they felt from state mandates. Their own empowering professional development experiences led these teachers to then create empowering experiences for their own students. Among the themes to emerge was that art making fosters empathy in the stories and experiences of others: "It makes you realize that every child has a story. Using poetry to tell these stories makes them into an art form and helps bring meaning to what they want to convey in a simple, concise but very powerful way." Many teachers expressed interest and enthusiasm in using the arts in their own classrooms. More importantly, teachers responded with insights about the profound impact this or similar experiences can have on learning and significant insights about their own practice as a result of the experience.

Discussion

This research is important in understanding teacher research and creativity as powerful forms of professional development that empower teachers who in turn discover ways to empower their students. Teacher educators need to consider the kinds of curricular experiences that effectively support teachers to engage in this work.

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A Project-Based Simulation Model for Construction Education

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Robert Pawloski, *Mumroe-Meyer Institute, University of Nebraska Medical Center*

Abstract: This paper addresses the implementation, progress and results of a test of a project-based serious game in Construction Management & Engineering. Virtual Interactive Construction Education (VICE) proposed six game modules of various construction projects to supplement or replace the traditional subject-based educational model. VICE Bridge is the first module being designed and developed for freshman construction students. It places players in the full context of construction management through a virtual simulation using cyberinfrastructure tools. This research study measured the construction content knowledge acquired by quantitative and qualitative methods. The results of a retrospective pre & post survey for 40 high school students with no experience in construction showed that the increase of construction content knowledge was significant for six main areas of construction. In another test, the results showed that this increase was significant in three areas for current construction students. The results of this research indicate that this simulation and project-based education model are effective for construction education.

Literature Review

Simulations and serious games for education have been increasing in the last decade. Serious games are a type of simulation whose main objective is to transfer educational contents (deFreitas 2006). Harz (2009) indicates that the number of serious games available for educational purposes is not sufficient. In a substantial investigation about serious games and their effectiveness, Tashiro (2009) proposes that more research is needed to determine if serious game will become valuable for education and professional development. Project-based education has a history dating back more than a century when John Dewey proposed a new approach in learning theory (Markham, Larmer & Ravitz, 2003). Project-based learning is a learner centered method that deals with real issues and results in perception of realities (Yam & Rossini, 2010). Learners are able to create knowledge (Liu, Lou, Shih, Meng & Lee, 2010). This method has been proven to enhance thinking and creativity (Kubiatko & Vaculova, 2011). Bas (2011) concludes that the effectiveness of project-based method as an alternative pedagogical model in academic environments has been proven in a variety of research studies.

Methodology

This research measures the effectiveness of VICE-Bridge on two populations. This environment was developed by using animations, voices, texts, and educational modules (Goedert, Rokooei & Pawloski, 2012). The methodology used quantitative methods. Performance data was collected within the game itself and players were directed to a pre- and post-survey. VICE-Bridge was tested by twelve undergraduate and graduate students in construction engineering and management programs, and then, forty high school students. Students were directed to log onto the VICE-Bridge module and allowed to play the game in a controlled environment for four hours. The level of practical construction knowledge defined by six subject areas of construction – construction methods, equipment, estimating, planning, cost analysis and safety, was measured by data collected by a survey using five point Likert scale. T-tests were performed to determine if there was a statistical difference between pre- and post- retrospective scorings resulting from the self-assessment of learning gains survey.

Results

VICE Bridge was found to provide an effective learning environment for a population of students with limited education in construction. The following tables show the results for 1: high school students group and 2: college student group. The results show there is a statistically significant difference between pre- and post- construction content knowledge in all six areas for high school students and three areas for college students.

Table 1: Results of Main Areas Questions Retrospection Pre/Post Survey Question High School Students

AREA	Methods		Equipment		Estimating		Planning		Cost Analysis		Safety	
	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre
Mean (μ)	3.02	1.8	2.75	1.42	3.38	2.15	3.03	2.08	2.9	2.03	2.38	1.82
Stand. Dev. (σ)	0.76	0.75	0.92	0.63	0.99	0.73	0.88	0.89	0.92	0.96	1.10	1.01
t-test ($p < .05$)	Different		Different		Different		Different		Different		Different	

Table 2: Results of Main Areas Questions Retrospection Pre/Post Survey Question College Students

AREA	Methods		Equipment		Estimating		Planning		Cost Analysis		Safety	
	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre
Mean (μ)	3.58	3	3.7	3.1	3.83	3.27	3.58	3.16	3.25	2.92	2.75	2.67
Stand. Dev. (σ)	0.76	1.15	0.46	0.94	0.90	1.05	0.86	1.14	0.83	1.04	1.01	1.1
t-test ($p < .05$)	Different		Different		Same		Different		Same		Same	

Discussion

There is much more work to be included before VICE Bridge is considered complete. However, the preliminary results indicate that it is currently effective for players with little construction knowledge. The more knowledgeable construction students showed no difference in knowledge gain for estimating, cost analysis and safety. This was as expected since the module had very little exposure to estimating and cost analysis and none for safety at the time of the tests. Player feedback indicates that additional work includes improving the animations, graphic, educational modules and other delivery elements to enhance effectiveness. This alternative method for construction education although primitive, shows that project based learning through serious games has merit and should be pursued for construction education and possibly other project-oriented disciplines.

Acknowledgement

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Wednesday

February 6, 2013

Session 3

1:30-2:20 PM

Presentations:

Training Teaching Assistants: Overcoming Resistance
Brown, D.

Tips for Teaching with Movies: Using Film to Provide Meaningful Learning Experiences
Walz, J., Creamer, E., and Kaufman, E.

Muppet Pedagogy: Bringing Sesame Street to the College Classroom
Lunsford, S., Breneman, D., and Ghiaciuc, S.

Living Learning Communities: Models of Authentic Community
Grohs, J., Keith, C., Penven, J., and Stephens, R.

S(t)imulating Students: Using Case-Study Simulations to Teach the Perspective of Constraint
Frusetta, J.

Inspiring Professional Students to Engage in Meaningful Service Learning Experiences
Brinegar, L., Woleben, C., Marlowe, E., and Carter, T.

Experiential Learning: An Exploration of Situated and Service Learning
Huisman, S., Edwards, A., and Huisman, S.

Striving to Care in the Midst of Chaos: Impact of the Use of Narrative Pedagogy
Miller, W., Cumbie, S., and Osmond, C.

<http://www.cider.vt.edu/conference/>

Training Teaching Assistants: Overcoming Resistance

Carolyn Brown, *College of Education, Division of Teaching & Learning, University of Missouri-St. Louis*

Abstract: Ruth Ray (1993), in her study of composition graduate students' introduction to action research in *The Practice of Theory*, argues that students may resist new methods of teaching and research for *rhetorical, pedagogical, or epistemological* reasons. Students who resist for *rhetorical* reasons often question and challenge new teaching theories in the university classroom. Students who resist for *pedagogical* reasons do not believe that constructivist teaching strategies and active learning activities are appropriate in the academic classroom. Students who resist for *epistemological* reasons have divergent beliefs about how knowledge is constructed and disseminated. My research found that Teaching Assistants in the low appropriator group demonstrated one or more of these areas of resistance in the voluntary Certificate in University Teaching (CUT) program at my university. I reasoned that perhaps CUT goals infringed upon and contradicted the low appropriators' personal constructs. I asked myself as I reflected on these questions: What differentiated these students from the rest of the participants in the CUT program who did practice accommodation? Why did these students appear to resist and reject CUT principles yet continue to remain in the program? What was my role in their varying degrees of resistance in the program? This practice session will focus on ways to reach the low appropriators in a Teaching Assistant training program.

Literature Review

A fourth type of resistance—*oppositional*—was demonstrated by two Teaching Assistants in the low appropriator group. Giroux, in his text *Theory and Resistance in Education* (1983), argues that the category of opposition can be political: “Some acts of resistance reveal quite visibly their radical potential, while others are rather ambiguous; still others may reveal nothing more than an affinity to the logic of domination and destruction.” Although the Teaching Assistants who demonstrated *oppositional* resistance by rejecting the structure of the CUT program and enacting appropriate teacher behavior in the classroom, their reasons for resistance were ambiguous and not necessarily political. Shor (1992) notes that *oppositional* students' behavior is a “reflexive resistance to authority.” In addition, Shor claims that students internalize this resistance and “take their sabotaging skills wherever they go.” The *oppositional* Teaching Assistants in this study demonstrated poor attitudes and rejected both positive feedback and constructive criticism.

Goals and Objectives for the Practice Session

First, participants will examine their own practice and behavior toward low appropriators by answering a series of writing prompts. Next, participants will share their responses in dyads or small groups. Then as a group we will characterize our previous interactions with low appropriators. Finally, we will brainstorm and draft ways to improve our relationships with Teaching Assistants who are considered low appropriators and discuss ideas for improving our Teaching Assistant Training programs to accommodate all of our Teaching Assistants.

Description of the Practice to be Modeled

Participants who attend this session will be able to identify the behaviors of Teaching Assistants who are low appropriators, what contextual factors contribute to their behavior, and how we can look reflectively at our own teaching and supervisory practices to improve Teaching Assistant effectiveness.

Discussion

The Learning Continuum Taxonomy based on the data analysis of this study provides one reference for discussion of contributing factors of Teaching Assistants who are low appropriators of a training program curriculum. The taxonomy organizes the range of CUT participant abilities and characteristics within a set of descriptive categories. While these categories describe Teaching Assistant behavior in this particular study, university faculty may identify these behaviors in their own students. This taxonomy is useful in identifying and understanding how Teaching Assistants experience the learning process. This taxonomy illustrates that learning is both complex and messy; rarely do students experience a linear path of academic growth. This taxonomy also shows that context matters—

contextual factors, including learning style, modeling, personality, motivation, culture, attitude, engagement, workload, and freedom of choice—situates a community of practice and its individuals and gives educators a way to unpack these influences in a more nuanced way. This session will address those Teaching Assistants who are either marginalized, ignored altogether, or who cause us to be frustrated and unable to enact graduate student change.

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Tips for Teaching with Movies: Using Film to Provide Meaningful Learning Experiences

Jerald H. Walz, *Educational Leadership & Policy Studies, Virginia Tech*
Elizabeth G. Creamer, *Educational Research and Evaluation, Virginia Tech*
Eric K. Kaufman, *Agricultural and Extension Education, Virginia Tech*

Abstract: Students learn through mastering increasingly complex tasks, as Bloom (1956) suggested. Thus, requiring students to conduct empirical research, a higher order skill, promotes learning. However, researchers find “entering the field” to collect new empirical data difficult and a time consuming, multi-step process (Creswell 2008; 2009; Rossman & Rallis, 2003). This makes teaching using student-collected empirical data all the more difficult, especially in a semester-long course. One solution to this dilemma is to use motion pictures as “the field” (Graham, Ackermann, & Maxwell, 2004; Graham, Sincoff, Baker, & Akermann, 2003; Hickam & Meixner, 2008; Jackson & Parry, 2008).

Grounded Theory Methods (GTM), an approach for collecting and analyzing qualitative data, focuses the researcher’s analysis on process (Charmaz, 2006). Similarly, as a subject-area, researchers examine leadership as a phenomenon based on process (Grint, 2005; 2010). Thus, GTM is an appropriate strategy for the study of leadership as a process (Parry, 1998).

The purpose of this workshop is to demonstrate how teachers may use motion pictures to enhance instruction—in this example, how students may use movies to develop a grounded theory of leadership. Presenters will explain how they have used movies in their courses and share recommendations for using film in classroom teaching. After reviewing the steps for developing a grounded theory, participants and presenters will view film clips and develop a rudimentary grounded theory of leadership. Through this interaction, the presenters will outline tips for teaching with motion pictures that are applicable more widely to other areas of scholarship.

Literature Review

Teaching content by having students collect new empirical data is challenging since “entering the field” is difficult. However, leadership scholars Jackson and Parry (2008) provide a solution—using movies to examine leadership: “From *Alien* to *Zorro* all you will see are leadership lessons” (p. 4). Using motion pictures as “the field” facilitates easy access for students to learn lessons by conducting their own empirical research.

Leadership researchers examine leadership in different ways and from different viewpoints. However, most scholars define leadership through the lens of person, position, result, or process (Grint, 2005; 2010). Those defining leadership as person focus on the characteristics of individuals that make them leaders. Those defining leadership as a position examine where leaders operate that makes them leaders. Those defining leadership as results consider what leaders achieve that makes them leaders. Finally, those defining leadership as process study how leaders get things done that makes them leaders. Moreover, Northouse (2010) distills leadership to “a process whereby an individual influences a group of individuals to achieve a common goal” (p. 3).

In as much as researchers examine leadership as a process, GTM may be deployed as an important research strategy. Charmaz (2006) defined process as the “unfolding temporal sequences that may have identifiable markers with clear beginnings and endings and benchmarks in between. The temporal sequences are linked in a process and lead to change. Thus, single events become linked as part of a whole” (p. 10). She argued that Grounded Theory is “an explicit method for analyzing processes” (Charmaz, 2006, p. 9). Indeed, Parry (1998) argued that leadership researchers have neglected qualitative methods in favor of quantitative analysis, leaving a significant gap in the understanding of leadership as a phenomenon. Furthermore, he argued that this gap may be filled using Grounded Theory and many scholars have taken the suggestion (e.g., Kempster & Parry, 2011; Lakshman, 2007; Komives, Owen, Longerbeam, Mainella, & Osteen, 2005; Rowland & Parry, 2009). Thus, Grounded Theory is a method applied increasingly to and appropriate for the study of leadership as a process. Using movies as “the field” facilitates easy access for students to learn lessons about both leadership and building Grounded Theory.

Goals and Objectives

After completing this workshop, participants will be able to (a) summarize rationales for using movies in classroom instruction, (b) identify how some professors have used film in their courses to enhance instruction, and (c) describe some best practices for using film in classroom teaching.

Description of Practice

In this interactive workshop, the presenters will review the process of developing Grounded Theory described by Charmaz (2006). This process includes developing research questions, collecting data, coding conceptually using constant-comparative methods, writing embedded, analytical and extended memos, refining conceptual categories, applying theoretical sampling, diagramming theoretical concepts, and finishing a written Grounded Theory (Charmaz, 2006). Participants will receive a research question and view film clips designed to display a leadership practice or behavior. When watching the clips, participants will note important leadership behaviors or processes displayed by the main character. The group will develop a Grounded Theory of leadership using observations from the film clips. Based on this exercise, participants will derive the best practices for using film in course instruction.

Discussion

As students and professors, we have experienced both effective and ineffective uses of motion pictures in course instruction. Teachers show films to fill time, to provide examples or illustrate important points, or to push students into higher levels of learning. We have found movies helpful for allowing students to apply lessons from theory or to conduct their own research and analysis. Along the way, we have learned how to use films in ways that increasingly enhance traditional forms of instruction and provide meaningful learning experiences.

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Muppet Pedagogy: Bringing *Sesame Street* to the College Classroom

Scott Lunsford, Daisy L. Breneman, & Susan Ghiaciuc, *School of Writing, Rhetoric, and Technical Communication, James Madison University*

Abstract: Ever since the first episode of *Sesame Street* aired in 1969, the show has served as a powerful teaching and learning tool for generations of young viewers, as well as their parents, caregivers, and teachers. This interactive presentation explores ways to bring *Sesame Street* to the college classroom, using theoretical and practical tools. Participants will explore ways to apply *Sesame Street* pedagogy to their own disciplines and classrooms and embrace the unique opportunities *Sesame Street* offers for engaging learners, merging education and play, exploring social issues, expanding approaches to inquiry, decentering the classroom, and nurturing diverse communities of learners. Following decades of research on the transformative potential of *Sesame Street*, we explore the show as an innovative avenue to deep learning and to new possibilities for higher education.

Literature Review

Sesame Street can serve as a transformational education model in the college classroom. From its inception in 1969, the children's show has strived to not only reflect the "real world" but also construct the possibility of what the real world could become, asserts Gerald Lesser (1974), the show's original curriculum developer. In line with Lesser, Ute Sartorius Kraidy (2002) argues that the show encourages us to "critique and transform existing social and cultural practices." Educational consultant Edward Palmer (1988) argues that the show developed in response to the "urgent need" to address not only social inequality but the educational gaps faced by disadvantaged preschoolers; the show accordingly offers incredible "teaching power" to explore and address these needs, by combining innovative education and fun. Much of the scholarship on *Sesame Street* deals with the show's effectiveness as an early childhood educational and socialization tool (Fisch and Truglio, 2001). However, recently *Sesame Street* has been studied from a variety of perspectives, including cultural studies (Kraidy, 2002 and Mandel, 2006), film studies (Leal 2009), and beyond. Into its fifth decade, *Sesame Street* has become the most researched children's television show in the history of the genre, thus pointing to its cultural and educational power.

Goals and Objectives

Throughout the session, participants will be encouraged to use *Sesame Street* to:

- Provide their students creative ways to think about their education
- Explore social issues such as ethnic, cultural, and global diversities
- Complicate seemingly simplistic approaches to learning in order to revise them for the college classroom
- Take a decentered pedagogical approach that (de)constructs classroom dynamics

Description and Discussion

Sesame Street began as a grand experiment, designed to help prepare underprivileged children for academic and social success in elementary school. Yet, *Sesame Street* became much more, and its lessons can be applied not only to preschoolers, but to students of higher education as well. As instructors, we are continually seeking innovative ways to help prepare our students for citizenship beyond college. Mining *Sesame Street* for examples, models, philosophies, and approaches to important human questions, we can reach students as critical thinkers, individuals, and citizens. *Sesame Street* becomes a powerful teaching and learning tool—for professors who are children of *Sesame Street*, and for our students who grew up on a *Sesame Street* that has adapted to meet the needs of new generations. We use *Sesame Street* to critique current classroom practices and explore possibilities for building strong classroom environments that invite deep learning.

The three presenters take unique but interconnected approaches to bringing *Sesame Street* to the college classroom. Presenter 1 focuses on material and embodied rhetoric to explore Elmo's approach to learning in *Elmo's World*: how we rely on material things to help us explore where we are and where we want to go. Elmo's approach helps instructors of inquiry-based research to remind students of their own agency and ethos, and the value of their

experiences and abilities to conduct appropriate methods of research. Presenter 2 uses a queer theory lens to model classroom environments on Sesame Street, a space that values curiosity, honors diversity, problematizes “normal,” challenges social injustice, and suggests new possibilities for constructing identities and communities. Presenter 3 examines *Sesame Street’s* Military Family Outreach programming entitled “Talk, Listen, Connect”, through which *Sesame Street* articulates and explains military stories that not only open up dialogue about military deployment and related injury, but that also explore a range of complex disability narratives that foster the agency of children within familial identities. These same narratives can serve an important function in college classrooms where students investigate how ethos is articulated, co-constructed, and maintained. *Sesame Street*, then, opens opportunities for nuanced discussions of disability in the college classroom, and uses disability as a framework for exploring issues of social justice. All three presenters explore the spaces *Sesame Street* opens up for transformational learning.

During this interactive, discussion-based workshop, participants will be encouraged to explore ways to apply *Sesame Street* pedagogy to their own classrooms, across a wide range of disciplines, in order to address the needs of 21st-century learners. Participants will be encouraged to consider theoretical and practical ways *Sesame Street* can enrich learning in the college classroom. After all, Sesame Street is a street of possibilities, a space that embraces curiosity and celebrates the diversity of an empowered community of learners.

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Living Learning Communities: Models of Authentic Community

Jacob Grohs, *VT Engage: The Community Learning Collaborative, Virginia Tech*

Caleb Keith, *Housing & Residence Life, Virginia Tech*

Andy Morikawa, *Institute for Policy and Governance, Virginia Tech*

James Penven, *Housing & Residence Life, Virginia Tech*

Robert Stephens, *Department of History & Honors Residential College, Virginia Tech*

Abstract: Universities have a unique privilege to create opportunities for students to witness and encounter authentic community. In this session, we will examine strategies to help students learn how to actively contribute to community. We will briefly provide an overview of *SERVE* and the *Honors Residential College*, two living learning communities at Virginia Tech that model community and offer service-learning opportunities to promote students' understanding of the broader community. We will then facilitate a dialogue among attendees regarding strategies, challenges, and mechanisms for creating meaningful community on the college campus.

Literature Review

A democratic society demands its citizens actively contribute to the community (Bringle & Steinberg, 2010). Opportunity to engage in meaningful, authentic community is diminishing (Putnam, 2000). Therefore, the university must assume its responsibility for purposeful community engagement in which students learn their role and obligation to community (Habermas, 1989). One mechanism for doing so is through service learning opportunities (Bringle & Steinberg, 2010). Participation in service activities (volunteering) positively impacts student development (Astin, Vogelgesang, Ikeda, and Yee, 2000). Integrating service activities within the curriculum of a course (Service-Learning) further enhances and exceeds outcomes associated with "service only" engagement (Astin, et al, 2000; Eyler, Giles, and Braxton, 1997). National studies indicate students involved in living learning communities demonstrate a greater commitment to civic engagement than their non-living learning community peers (Brower & Inkelas, 2010). Living-learning communities are designed to integrate students' intellectual and social lives (Shapiro and Levine, 1999). While living-learning communities originate from the residential colleges of Oxford and Cambridge, in the United States, these communities in part resulted from Alexander Meiklejohn's Experimental College at the University of Wisconsin at Madison (Brower and Inkelas, 2010; O'Connor, 2003). Meiklejohn's community sought to integrate students, faculty, and the curriculum (O'Connor, 2003).

Research indicates this integration; in the form of an intentionally planned living-learning community, has positive effects for student learning (NSLLP, 2007; Shapiro & Levine, 1999). Additionally, these communities provide meaningful encounters in which student connect, belong, and learn from each other (NSLLP, 2007).

Goals and Objectives for the Practice Session

This practice session will focus on two key elements:

- 1) The role of living-learning communities as models of authentic community.
- 2) The embedding of service-learning and civic engagement within a living-learning community and how this serves as rich model for student learning and social development.

Description of the Practice to be Modeled

Participants attending this session will learn how living-learning communities can model authentic community and serve as mechanisms for teaching community. Additionally, participants will learn how intentionally created service-learning/civic engagement programs embedded within these communities leads to greater student learning about the larger community. Participants will be able to engage in conversation (in a roundtable format) with presenters and attendees regarding the challenges and opportunities of teaching "community".

Discussion

The Department of Housing and Residence Life at Virginia Tech has worked collaboratively with academic colleges and departments for over 15 years in creating and developing living learning communities. In their infancy, these

communities served to connect first year students with fellow peers, often providing a cohort in which to navigate difficult first year courses. These communities though, were often limited to their academic disciplinary focus (e.g. engineering, science, etc.)

In 2009, VT Engage: The Community Learning Collaborative and Housing and Residence Life conceived and launched: *SERVE* (Students Engaging and Responding through Volunteer Experiences), an experimental living-learning community to create opportunities for service and community learning. Just three years later, this community has tripled in size and serves as a model for how living and learning and civic engagement are powerful instruments in building capacity for authentic community. Opening in 2011, the Honors Residential College (HRC) at Virginia Tech is a 300 person living learning community founded on the traditional Oxford/Cambridge model of collegiate life. This faculty led, multi-disciplinary, freshman through graduate student community encourages a holistic approach for student learning, engagement, and community formation. Students assume significant responsibility for the creation of a meaningful community in which students “know and are known”. Requiring curiosity and vulnerability, knowing others and being known by others creates opportunities for learning, belonging, and student growth.

A living-learning community expands the potential for learning because it consists of curricular and co-curricular learning opportunities. In *SERVE*, students are co-enrolled in a leadership theory course as well as participate in on-going service in the local community. Because this service is on-going, students compile a holistic understanding of issues affecting the local community. Students begin to learn how their service fits into a complex environment and they transform from “service provider” to community member. The rhythm of life in the HRC is one which offers students multiple opportunities to come together socially and intellectually. A weekly “house dinner”, principal’s tea, movie and discussion are just a few of the recurring events in the college creating an atmosphere in which students, faculty, and staff purposefully come together. These types of structures offer a model for creating and modeling authentic community. By their active engagement students learn first-hand the responsibilities, challenges and rewards of connecting themselves to a community.

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S(t)imulating Students: Using Case-Study Simulations to Teach the Perspective of Constraint

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Abstract: This practice session will consider the utility of teaching constraint through in-class simulations. Role-playing simulations (Pew Studies, Reacting to the Past) are often utilized to teach students the potential range of actions that a decision-maker has in specific circumstances. This session suggests the merit of and methods to teach how such choices are often limited. Participants will see the example of a specific original classroom simulation (of Southeastern Europe in 1936-1944) in which the presenter assigned 46 students both a country and a political party. Students were instructed to seek to accomplish both the goals of both, but within the limits of British, German, and Soviet policy. This will be illustrated by having participants “work through” the challenges students faced, initially as a single group and then divided into small groups. Specific problems in teaching constraint (e.g., student concerns over limited freedom of action) will be discussed, informed by student feedback through supplemental evaluations. The presenter will suggest specific means to address these based on classroom experience. The goal of this practice is to encourage students to consider decision-making in its context, a concept central to history but which has utility across disciplinary boundaries.

Literature Review

Faculty frequently use simulations to either “draw in” students (Lightcap, 2009; Barnes et al., 1994; Porter, 2009; Peterson, 2012) or to encourage students to see the unfamiliar perspectives of decision-makers (Dougherty, 2003; Ambrosio, 2004; Miner, 1977; Barnes et al., 1994). While there has been attention to the ways that simulations can focus student attention on the context in which decisions are made (Gorton et al., 2012; Larson, 2004), there has been less attention to how well these simulations can teach constraint. Most simulations stress “what can be done” rather than “what cannot be done,” leaving the latter within the purview of the supervising faculty or student assistants (Gibier, 2004). This can potentially distort student views, encouraging participants to pursue original and innovative ideas that are inappropriate for the case study at hand. While some case studies address this by providing specific possible actions by student participants (Brussel, 1988), this session will emphasize the way that constraint can be the specific focus of a simulation, and accordingly how to create rules to allow this (Sabin, 2012; Pulsipher, 2012).

Goals and Objectives

Participants in this session will gain a brief introduction to simulations as a pedagogical tool in university classrooms, and an introduction to the idea of using simulations to specifically illustrate the idea of constraint. They will see examples of an original simulation used in a history course, and examples of student decisions in that simulation. By engaging directly the samples from that simulation, they will gain insight into how students view that process. They will then consider how they (or faculty at their institutions) could use constraint-based simulations, and we will brainstorm both ideas and means to either create such activities or to enhance published versions (focusing on Pew Case Studies and Reacting to the Past, two popular published series).

Description of Practice

I will model a constraints-centered student simulation. Briefly discussing the utility of in-class simulations and their utility in teaching, I will turn to showing samples of a simulation focusing on the history of Eastern Europe in the period 1936-44. What did students do, what was their experience, and how did this fit both the goals of the simulation and the goals for the class? I will then walk participants through elements of the simulation. Initial examples will show how the decision-making process worked in the course. Dividing the participants into several groups, I will illustrate the focus on constraint with a “sample” round where groups attempt to resolve a specific decision. We will then discuss and brainstorm ways that this approach is applicable to other disciplines and specific courses, and I will distribute a starting bibliography and specific “tips and tricks” in applying constraint in simulations, given the feedback students have provided me.

Discussion

As a historian, I often hear students express puzzlement about the “whys” of history — why did historical figures, parties or states make decisions that seem foolish. This has led me to experiment to find pedagogical approaches that help students understand the constraints on possible action. Simulations are a popular way to teach this, but I was concerned that many such simulations are either too narrowly focused, or allow for too much possible freedom of action.

In teaching a course on the history of Eastern Europe in the twentieth century, I created a semester-long simulation intended to provide students with an opportunity to make their own decisions for the period 1936-1944. Students were assigned to one of six groups representing a country, with each student assigned a historical political group within the country; national and political party goals were assigned to each student, often *conflicting* goals. I also enlisted three volunteer upperclassmen to serve as proxies for the British, Germans, and Soviets, providing firm constraints on the scope of action. Over the course of the semester, students had an opportunity to see the historical problems of coordinated action, the relative weakness of the region, and the very real problems of foreign interest. The students’ final project was a paper engaging the problems they experienced in the game, and how they related these problems to context of the period. In focusing on constraints, I found useful ways to encourage students to study what the “limits” of action are, and have subsequently altered or modified published case studies in teaching other courses in order to amplify this point.

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Inspiring Professional Students to Engage in Meaningful Service Learning Experiences

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Abstract: This session describes the learning outcomes of 400 first-year medical students in a newly-designed service learning initiative to promote better understanding of the social, emotional, economic, and life space environments of people in the community. Two cohorts of students (academic years 2010-2011 and 2011-2012) were allowed to locate their own site for contributing a minimum of 20 hours of community service in a *non-healthcare provider* capacity and for documenting their experiences through reflective learning essays. At the end of the course, each student created a synthesis of the learning experience in the form of art, poetry, narrative, or other creative rendering. Our experience leads us to believe that many forms of professional education—in healthcare, law, education and other fields of study—could be strengthened through a more holistic appreciation of the needs of the population served. Future professionals, traditionally steeped in education that develops them as experts in their applied disciplines, can become inspired through greater appreciation of their role in meeting community needs.

Literature Review

This brief review addresses service learning as an outgrowth of Dewey's (1916, 1938/1963) descriptions of learning through life experience and the notion of "embodied" learning through reflective practice (Kinsella, 2007), including Schön's (1983, 1988) seminal writings on reflection-in-action and reflection-on-action in the development of professionals. Schön's description of reflective practice includes the idea of looking back on experience to understand it, a traditional notion of what it means to "reflect," but also addresses reflection that occurs when a person encounters the unexpected while engaged in action so that the element of surprise generates a reflective moment during which adjustments in how we respond to a situation can shape the outcome. This continuity between thinking and doing as a seamless experience has carried into more recent literature on the nature of situated learning (Lave & Wenger, 1991) in which context, learning, and doing are so closely intertwined as to be indistinguishable. When executed well, service learning has this potential to engage learners in the seamless activity of learning, doing, and reflecting in the moment, as well as through more structured opportunities for post-experience reflective activity.

Our experiences with first-year professional students lead us to believe that through reflection on the meaning of service learning, students gain greater understanding into their own motivations for professional practice and greater insight into the community and people that they will serve. Some students experience transformative learning (Mezirow, 1991) in which they actually revise existing beliefs, values, and assumptions that may have been assimilated uncritically in childhood. Mezirow asserts that such a major transformation in perspective occurs through critical reflection on the premises that undergird prior beliefs, such as what it means to be able-bodied, disabled, or disadvantaged in our society.

In the last fifteen years, service learning initiatives have been adopted on many campuses within undergraduate and professional education programs to attract millennial students with altruistic aspirations and to forge connections between higher education and the communities they serve (Seifer, Hermanns, & Lewis, 2000). The purpose of service learning programs is to link service that meets a defined community need to academic goals and objectives to enhance student learning in a real-life context (Cone & Harris, 1996). The idea of contextually-based learning has deep roots: Dewey (1916, 1938/1963) provided the intellectual underpinnings for essential service learning components of student involvement in the construction of learning objectives, working together rather than in isolation on learning tasks, the use of "educative" life experiences as the basis for formal learning, the importance of social and not just intellectual development, and the value of actions directed toward improving the welfare of others (Kraft, 1996).

Goals and Objectives

By the end of this practice session, attendees will have (a) examined the benefits of service learning initiatives for professional level education, (b) appreciated the challenges of integrating service learning in meaningful ways

within an existing curriculum, (c) considered the differences between volunteer experiences and service learning initiatives, (d) considered how student development can be enhanced through peer educators, and (e) discussed how session attendees might incorporate service learning into courses that they teach to inspire students for their future roles as professionals in the community. Our goal is to illustrate the practice of service learning in professional education, explore the nature of reflective practice within the service learning experience, and then provide an opportunity for small group discussion among session attendees so that they might consider the potential benefits associated with the pedagogy of service learning.

Description of Practice

Our focus for this session will be to engage session attendees in a discussion of how service learning courses can provide a deeper and more meaningful learning experience that is situated in the context of future practice environments for professional students. We will describe the difference between service learning and volunteering as community service by emphasizing the three cornerstones of service learning pedagogy: participation in a structured learning activity, a service contribution that meets community-identified needs, and engagement in focused reflection.

We will describe the evolution of a service learning course for first-year students within a medical education curriculum during two academic years, 2010-2012. While originally designed to meet new accreditation requirements, we discovered many unanticipated benefits of service learning as well as a few challenges associated with embedding service learning into an existing curriculum. We will illustrate our use of peer educators as instructors to address issues of health disparities, promote better student acceptance of the course, and provide an opportunity for motivated senior students to gain valuable teaching experience. By sharing excerpts from students' written and artistic reflections, we will demonstrate why we chose to encourage medical students to volunteer in non-medical community service to engage them in interactions with the patient population they will eventually serve. Finally, we plan to provide time for open discussion so that attendees might share their own service learning experiences or consider how they might include service learning to promote best practices across disciplines.

Discussion

We discovered that service learning has benefits beyond those initially anticipated. Not only is it learning *in situ*, integrating students' understanding of the complex milieu of social, emotional, socio-economic, and cultural diversity in the community, but it also fosters learning that holds potential to transform deeply ingrained beliefs, values, and assumptions about those they will serve as future professionals. Challenges in implementing service learning include the degree to which it can be truly integrated into the curriculum and not "stand alone" as an experience divorced from traditional rigors of professional preparation. We believe that inspiring students to reconsider community needs through service learning has application for a wide variety of academic programs.

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Experiential Learning: An Exploration of Situated and Service Learning

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Abstract: Two separate research studies explored two types of experiential learning, situated learning and service learning, used in a liberal arts university setting to further understand their importance in the learning process. From both the service learning and situated learning research, two main findings emerged, limited student reflection and connection of course objectives to the experiential experiences. The lack of continuous, critical reflection in both courses hindered the students' learning. Furthermore, little connection was made between the course content or objectives and the experiences. Results from these studies provide insight and knowledge into the importance of structuring quality experiential learning courses. More specifically, the findings show the importance of instructors designing and structuring courses, which incorporate opportunities for students to learn how to critically reflect by engaging in ongoing reflection throughout the experience and purposefully aligning the objectives of the course with the goals of the experiential learning project to have more positive outcomes on student learning.

Literature Review

Hands-on learning is not an innovative idea for the teaching and learning process. For many years college programs have used experiential learning to enhance student learning. The premise of hands-on learning is constructivist in nature which enables students to create meaningful experiences that will connect their prior knowledge or schema and assist in creating knowledge (Mezirow, 1994; Baxter Magolda, 2004). Various forms of hands-on or experiential learning exist, including practicum, internships, service learning, communities of practice and field based study. Each form of experiential learning can serve a purpose for the teaching and learning process if the goals and methods for implementation are well planned and structured. This research explores two types of experiential learning to see how constructivist learning can assist at the university level.

Methodology

Two different studies were conducted to explore situated and service learning. In the fall of 2008 in a junior level early childhood curriculum class, action research was conducted on 11 students to explore situated learning within a kindergarten classroom in a large Midwest school district. Students completed a pre-post case study to explore numerous early childhood curriculum concepts and theories of teaching. The class met at an urban school the second week of class to informally learn about the school, assigned cooperating teacher (kindergarten teacher), students and the overall culture. Each university student was assigned a kindergarten student by the cooperating teacher. The assigned kindergarten student became the focus of the observations for the semester. University students then alternated between attending class at the university and visiting the elementary school to work in the classroom. The alternating between receiving content at the university and practicing the knowledge at the elementary school took place over the course 14 weeks. Each time the university student went to the elementary school they were required to reflect in their journal after the visit. In addition a variety of assignments were conducted. At the end of the semester the students completed the post test case study to assess content knowledge. The second study focused on service learning in a Family and Consumer Sciences class at the same university as the study described above. Nonprobability sampling occurred through examination of a course entitled Management of Family Resources from four various semesters (spring 2006, fall 2006, spring 2007 and summer 2007). Of the 38 students that were solicited for the study, 11 agreed to participate in the in-depth interviews. In addition to in-depth interviews, students' final reflection papers and surveys were utilized. The in-depth, semi-structured interviews were 25-45 minutes in length and were recorded and transcribed. Participants were asked 10 pre-set, open-ended interview questions, along with additional probing questions to explore their experience in the service learning component of the course.

Data Analysis

Data was analyzed and themes were found using Strauss and Corbin's (1990) theory of analysis comprised of open coding, axial coding and selective coding as well as Merriam's (1998) constant comparative model. Data for the

situated learning included the pre-post case studies, online reflections, journals, and student work. Data for the service learning included interviews, final reflection paper, and surveys.

Results/Discussion

Two main themes emerged from the studies: limited student reflection and connection of the course objectives to the experiential experiences. Limited reflections were found within both studies during and after the experiential learning. Most students started their journals and reflection with literally describing their experience, which typically focused on the environment. For example, “No air conditioning and no fans, but windows opened”, “...the building is old”, “I hear lots of cars driving on the street...it is distracting”. At the beginning of the semester, the researcher for the situated learning asked the university student show many of them had completed practicum experiences in an urban setting. Out of the 11 students for the study only 2 students had experience in the urban classroom. Towards the end of the students started to shift their attention from their surroundings to actual pedagogy and curriculum. Even though the service learning course required students to reflect, it was not as consistent and on-going in nature as the situated learning. Students in the service learning were asked to reflect at the end of their experience. Even though students were asked to do it at the end, several students made mention of keeping journals throughout the experience. Students in the service learning made mention of the value of in-class reflection and how valuable this was for the experience to share with their peers. As one student noted, “We all got a chance to talk about our experiences. I think it was helpful for me to be able to reflect. It is good to talk about what I did and hear about what other people were doing. I found out about what other things were going on that I would not have known about. I would out about resources in my community”. Several students in the service learning class made note that they would have learned more if they were required to reflect more, as one student noted “It [service learning] would have been more beneficial if it tied into the class more, less book work and more communication throughout the semester about the experience. We could have all spoken about our service experiences”. These participants illustrated the importance of verbally reflecting with others throughout the semester- long project. After analysis, the second main theme of lack of connection to course content and/or objectives emerged from both studies. This refers to the degree in which the course content or objectives of the course related and/or applied to the participants’ experiences. For example in the situated learning research, one student wrote in their journal “I don’t understand why learning centers is considered curriculum”? The purpose of the experiential learning was to have university students take the content learned in the university setting and apply it, explore it or witness it in the real world setting (the kindergarten classroom). The university instructor and cooperating teacher worked closely together to weave the content together and share content objectives. However, students struggled to make the connection. One student wrote in her journal “I struggle with connect the stuff we learn at school [university classroom] with what I am observing... how is this curriculum”? Similarly in the service learning research 9 participants only noted a connection to 2 (time management and community resources) out of the 12 course objectives. One student stated “I do not want to say it was completely random, but I almost felt like there should have been a class that was nothing but service learning. I do not think it [service learning and course content] was a huge correction”.

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**Striving to Care in the Midst of Chaos:
Impact of the Use of Narrative Pedagogy in a Nursing Leadership Course**

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Abstract: Caring may be defined as context-specific, inter-relational processes between a caring person and the recipient of care. Work with narrative has been demonstrated to improve the empathy attitudes of caring professionals toward patients. Professional roles and expectations can significantly influence the degree to which caring is demonstrated in practice. Narrative strategies were used to facilitate students' exploration of caring as context-specific and inter-relational. This grounded theory study explored the impact of the use of narrative pedagogy in a nursing leadership course offered summer 2012 with a group of 16 RN-BSN students. The purpose of this pilot study was to explore the impact of the integration of narrative into a nursing leadership course and to examine how narrative study enhances students' understanding of caring. Grounded theory constant comparative method was used to facilitate pattern coding, identify recurring themes and categories, and develop conceptual constructs. Initial analysis of the data resulted in the following construct descriptions: 1) the process of students' engagement with the narrative text; 2) dialectic tensions within nursing practice; 3) the perspective of caring practice as context-specific and inter-relational; and 4) the impact of the integration of narrative into a nursing leadership course. Throughout this presentation, we will share selections from the data that directly support the research findings and theoretical constructs. These rich expressive student narratives offer a glimpse of the poignant and often moving reflections participants provided.

Background

Caring science touches upon human existence and is the foundation and guide for practitioners in the caring professions. Caring comprises context-specific situations where openness, authenticity, and sensibility appear to be central qualities (Watson, 2008). From this theoretical perspective, caring may be further defined as context-specific, inter-relational processes between a caring person and the human being as the recipient of care. Narrative competence has been theorized by Charon (2004) as "a set of skills [that are] required to recognize, absorb, interpret, and be moved by the stories one hears and reads (p. 862)." The goal of reading short stories, poems, and other narratives with future caring professionals is to facilitate development of practitioner interpretive skills necessary to follow a narrative thread, adopt multiple and contradictory points of view, and tolerate the ambiguity of stories (p. 194). Work with narrative has also been demonstrated to improve the empathy attitudes of caring professionals toward patients and clients (Clary, 2008). Additionally, narrative study has been shown to enhance caregivers' development of habits that increase capacity for self-care and resilience to burnout (Kearney, Weininger, Vachon, Harrison, & Mount, 2009).

Professional roles and expectations can significantly influence the degree to which empathy is demonstrated in practice. Cultivating humanistic values, enhancing interpersonal skills and empathy in particular are of paramount importance in any human service endeavor (Hojat, et al, 2009, p. 1182). Strategies to augment empathy in caring professionals can be more appropriately established on the basis of a clear understanding of the relationship between narrative competency and development of empathy among students in the caring professions.

This grounded theory study explored the impact of the use of narrative pedagogy in a nursing leadership course offered summer 2012 with a group of 16 RN-BSN students. Two research questions guided the study method:

1. How does narrative study enhance students' understanding of caring as context-specific and inter-relational?
2. How do RN to BSN nursing students describe the impact of the integration of narrative into a nursing leadership course?

The aim of this study was to understand the impact of narrative pedagogy on enhancing development of the caring professional. The purpose of this pilot study was to explore the impact of the integration of narrative into a nursing leadership course and to examine how narrative study enhances students' understanding of caring.

Methodology

A qualitative research design was utilized for this exploratory-descriptive study. Grounded theory method provided a systematic approach for collection and analysis of qualitative data toward the purpose of generating exploratory theory. University IRB approval was obtained prior to the start of data collection and all enrolled students chose to participate. The study sample included 16 students (15 female & 1 male) enrolled in a leadership course in a RN-BSN nursing program, summer 2012. During the 10-week hybrid course, standard content was enhanced with narrative reading and writing activities. Students read selections from *The Heart's Truth: Essays on the Art of Nursing* (Davis, 2009) and then responded via either in-class discussion or online reflective writing. Qualitative data collected include: 1) audio recordings of four (4) in-class discussions related to narrative readings; 2) online class forum- five (5) written discussions; 3) researcher field notes; and 4) transcription of all audio recordings.

Data Analysis

Consistent with grounded theory approach, constant comparative method was used to 1) facilitate pattern coding, 2) identify recurring themes and categories, and 3) develop conceptual constructs. Analysis included not only discovery of commonalities across participants but also a search for natural variation in the data. The study research questions provided the foundational structure for interpreting the data and guiding first phase analysis. Data analysis included simultaneous data collection and analysis, two-step coding process, comparative methods, construction of conceptual analyses, comparative sampling from the data to refine emerging conceptual ideas; and initial construction of conceptual frameworks.

Results & Discussion

Initial analysis of the data resulted in the following more prominent construct descriptions: 1) the process of students' engagement with the narrative text; 2) dialectic tensions within their nursing practice; 3) the perspective of caring practice as context-specific and inter-relational; and 4) the impact of the integration of narrative into a nursing leadership course. Student engagement with the text revealed a dynamic process: connection with the text, reflection, reminiscence, insight, self-discovery, resolution, and self-renewal. Examples of dialectic tensions noted include: infallibility-fallibility, little control-big impact, caring for patients-self caring, giving-receiving, and task focus-patient focus. Participants offered rich descriptions of the impact of context-related dynamics on their ability to engage in authentic inter-relational and caring moments with patients and families. Participants described multiple benefits they experienced through reading the narratives, then writing about their own experiences.

Throughout this presentation, we will share selections from the data that support and enhance the research findings and theoretical constructs. These rich expressive narratives offer a glimpse of the poignant and often moving reflections participants provided. For example, commenting on the narrative activities, one participant stated: "The impact of the integration of narrative into this course has given back meaning to my practice. It has given me vocabulary to articulate the dissatisfaction I have felt creeping into the margins of my work day." Another commented that, "Reading the narratives put nursing into perspective for me. It brought me back to ground level and reminded me that no matter how stressful our job is, we are caring for real people."

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Wednesday

February 6, 2013

Session 4

2:40-3:30 PM

Presentations:

Using Mendeley for Collaborative Learning
Eddy, P., Khwaja, T., and Stone, S.

Connecting with Students: The Use of Hand-Held Interactive Whiteboards
Hamson-Utley, J., Donahue, M., and Eads, A.

Universal Instructional Design: Accessing the Core Curriculum for Students with Blindness
Hartman, D., Bhandari, N., and Chowdhury, S.

Engaging Campus and Community: Developing Community Partnerships Through Service-Learning
Helms, J., Niewolny, K., and Clark, S.

Using Dialogic Inquiry in Higher Education
Rundell, F., and Sheety, A.

Applying Gaming Principles and Open-Source Tools to Course Redesign
Kopcha, T., and Choi, I.

Research Instruction Through Librarian-Faculty Collaboration Using Engaging Strategies
Hsieh, M., Hofmann, M., Dawson, P., and Titus, M.

Lessons Learned from the Formative Evaluation of Physics Recitation
Calixte, M., Wu, R., and Brill, J.

<http://www.cider.vt.edu/conference/>

Using Mendeley for Collaborative Learning

Pamela Eddy, Tehmina Khwaja, & Sharon Stone
Educational Policy, Planning, and Leadership
The College of William and Mary

Abstract: This session will review using an online reference tool, Mendeley, as a platform to allow for collaborative learning among students. It will provide background on the strategy of collaborative learning and focus on how this form of technology can provide a means for students to collaborate with one another between class meetings. Participants will be asked to share examples from their own practice on the use of technology to facilitate collaboration.

Literature Review

Mendeley is a free online reference tool for organizing, sharing and collaborating on research papers (<http://www.mendeley.com/>). It is also a resource that enables students and academics to follow research trends, and connect with researchers in the discipline. The system utilizes both a desktop version to organize references and an online platform that allows for sharing of references and resources among participants. Moreover, the online system allows access to groups studying similar areas of interest and the sharing of reference libraries among users. Mendeley can serve as an invaluable tool and teaching strategy for collaborative learning in college classrooms. One of the major strengths of Mendeley as a collaborative tool is that it is simple enough for digital immigrants to use and technologically sharp enough to interest native users of social media, thus allowing researchers and students with varying technological skills to collaborate on research and class projects (Zaugg, West, Tateishi, & Randall, 2011).

Working collaboratively provides not only valuable interpersonal and teambuilding skills, it can also deepen the learning experiences for students (Nilson, 2010). Further, research in Cognitive Load Theory suggests that collaborative learning environments may be an ideal model for constructing, reorganizing, and acquiring new information (Janssen, Kirschner, Erkens, Kirschner, & Paas, 2010). Currently, the general term used for collaborative learning is group work or group learning (Nilson, 2010). According to Nilson,

the research on the effects of group learning has focused on three fundamental dimensions—achievement/productivity (learning), positive interpersonal relationships, and psychological health—and group work yields positive results on all of them (Johnson et al., 1991; Johnson & Johnson, 1989, 1994; Millis & Cottell, 1998 as cited in Nilson, p. 156).

Although there are still benefits to individual work and other types of teaching strategies that should complement course level group work, research in the classroom documents the benefits of group learning in different course levels and for different student experience levels (Nilson, 2010). The shift to group work means that students must assume more responsibility as a result of group expectations and responsibilities and that faculty must structure the experience to obtain the best results. The push for increased interdisciplinary work in college (Lattuca, Voight, & Fath, 2004) adds support for the benefits of collaboration. Likewise, employers seek new hires who are able to participate in teams and contribute to the group projects (Belbin, 2010).

Mendeley provides one tool for supporting collaboration in the college classroom. From individual libraries to research team toolkits to collaborative class projects, Mendeley provides a simple method for organizing and sharing research content online. Thus, it can provide a bridge between classroom learning and a potential audience. Additionally, the social nature of the collaborative space provides a means for scaffolding socially constructed knowledge (Barton & Cummings, 2008). Students learn from their peers, serve to facilitate the learning of others, and are guided by faculty during the process of collaborative learning.

Description of Practice Focus

The increased documentation on the benefits of collaborative learning requires new teaching strategies to incorporate this type of format in the classroom. The focus of this session is on the use of Mendeley, an online research management tool for organizing, locating, and collaborating on research papers, as a collaborative learning

resource in college classrooms. Mendeley can also provide a platform to keep abreast of research trends and connect to other academics in their area of inquiry. It can, therefore, be an invaluable tool for researchers, scholars and students who wish to collaborate with their peers not only in the classroom but across the globe.

Mendeley can provide a virtual meeting space for group work. It allows users to work individually or collaboratively on PDF management and annotation, and citation organization. However, the most useful feature of Mendeley is the online synchronization tool which makes the content and updates accessible at any time and from any place to all collaborators. It is the ease of collaboration that makes Mendeley a powerful tool for researchers as well as students.

The information presented in this session reflects how faculty members have used Mendeley as part of classroom learning and course assignments and how this has made collaborating on projects effective and efficient. Additionally, the presenters will share examples of instructional uses of Mendeley to support collaborative knowledge construction in graduate level education courses. The session will culminate in a question and answer discussion of some of the challenges and strategies for utilizing Mendeley as a collaborative tool in classroom settings.

Goals and Objectives for the Practice Session

The session is designed to be highly interactive and has the following learning objectives:

- Objective #1:* To define the concept of collaborative learning.
- Objective #2:* To discuss best practices for employing various forms of technology to improve student collaborations.
- Objective #3:* To identify key learning outcomes for a course assignment that uses Mendeley. The group project centers on research article critiques and evaluations of the collaborative exercise.
- Objective #4:* To review the challenges of employing technology for collaborative processes.

Discussion/Conclusion

As reflective practitioners, faculty members continue to investigate their methods to improve learning opportunities for students. Mendeley provides one mechanism to promote collaborative knowledge construction. As with any new technology, faculty members must assess how the technology adds to student learning. Merely substituting a digital version of an inadequate tool will not enhance the learning experience for students or justify the time and expense of implementing the new technology. Additionally, clear learning objectives and evaluation measures help provide students with a framework of how they can use Mendeley to collaborate on class projects and research papers with their peers. The benefits of the process and acquired skills can contribute to enhanced student learning and, ultimately, help prepare students with the skill base required in our changing, complex world. By interrogating their own teaching practices, faculty members can contribute to the scholarship of teaching to advance knowledge of how group work can improve student learning.

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Connecting with Students: The Use of Hand-held Interactive Whiteboards

Matthew Donahue, Adrian Eads, & J. Jordan Hamson-Utley
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Abstract: Increasing the use of technology is important to meet the needs of students and keep them involved in class discussion. Students demand an increased use of technology to meet their changing lifestyles. Educators cannot leap to meet these demands without determining if the effectiveness of the chosen technology meets their student's needs. Learn to use interactive technology through the use of hand-held interactive whiteboards, which allows you to control your computer desktop, record your lectures, and add to the presentation during your lectures. These updated presentations can then be later uploaded allowing students to review lectures from their computers and mobile devices to increase their learning and comprehension.

Literature Review

Technology has changed learning over the past decade. With many students having access to mobile devices they are becoming empowered to utilize their mobile devices to aid in their learning. Students who utilize their mobile devices to access course content spend more time studying and feel their learning is more flexible (Dahlstrom, 2012; Saltalamachia, 2008; Young, 2009). Mobile devices offer flexibility, growing content libraries, and easy information transmittal. Additionally, students have 24/7 access to textbooks, digital flashcards, and lecture or supplemental podcasts offered by their instructors to meet the flexibility demands of their students (Kraft, 2007; Todaro, 2005).

The time has come to blend the learning environments with technology as the majority of students feel this is how they learn (EDUCAUSE, 2012). Students are no longer pacified with traditional lectures; it is expected instructors will engage them in learning through technology (Dahlstrom, 2012). By recording interactive lectures in class and allowing students open access, students may perform better on examinations (Widstrom, 2011). Technology is no longer an add-on in the classroom; it is an integral part of the learning experience. The interactive whiteboards allows instructors to deliver creative and interactive material to students while capturing the pedagogy live for later remediation. Students enjoy presentations and discussions using interactive whiteboards and instructors can orchestrate more in-depth lessons (Campbell & Martin, 2010).

Interactive whiteboards increase student motivation, result in more interactive classes, and overall increase the marketability of students as they interact with technology (Blue & Tirota, 2011).

Goals and Objectives

After participating in this session individuals will be able to:

1. Define and describe interactive whiteboard applications
2. Utilize Doceri interactive whiteboard software for PC or Mac (<http://doceri.com/>)
3. Record lectures in two ways
 - a. Doceri
 - b. Screen Capture Software

Description

'Flipping the classroom' encompasses more than simply recording and posting lectures. Research has found that short "quick hit" lectures, lasting no longer than the length of an average song can be the more beneficial for students (Chen, Lee, 2006). Particularly when these 'quick hits' focus on important concepts that may require repeated review. These concepts are generally highlighted extensively during face-to-face lectures with instructor utilizing graphics, hand drawn notations and other instructional aids to assist the learning process. Students generally would not have access to these detailed explanation and visual aids again unless the classroom had extensive technology enhancements (ie. Smartboards, video-recording capabilities). Through the use of a screen capture application such as Camtasia or Screenflow, Doceri Desktop software and an iPad, instructors can capture these annotated lectures with ease. Enhanced recorded lectures can be edited into short 'quick hit' podcasts highlighting one particularly difficult concepts. These 'quick hits' can then be posted for review at the student's convenience.

Evidence, while limited, suggests that students are more like to view and utilize these short 'quick hit' concept reviews more than an entire lecture (Chen, Lee, 2006; Elliot, King, Scutter, 2009).

In this presentation we will demonstrate the combined use of screen capture software and Doceri Desktop. This combination allows the features of a smart board at a lower cost (Bowen et al., 2012), the freedom of mobility in the classroom, and the flexibility to move the technology to any classroom. Each attendee will have an iPad in hands to learn the use of Doceri and various lecture capture features. The co-presenters will lead the group through a practice run via projection of iPad in-hand, and then attendees will be supported to try a capture on their own device.

Discussion

Following the practice session, attendees will receive a list of supplies to purchase to accompany their newly learned skill. If equipped with a tablet or iPad, attendees will be able to enter their classroom Monday morning and implement Doceri on a tablet, capturing integrate lecture components to augment their online, hybrid, or face-to-face learning environments. It is the intent of this practice session to deliver not only skills, but evidence to base on which to base that practice. A list of resources will be provided to attendees via QR code. Finally, attendees will be prompted for questions and discussion surrounding pedagogy research and data collection in their classrooms:

1. What does research say about best practice lecture capture for face-to-face, hybrid and online instruction?
2. How does this research fit into your current setting? What roadblocks might you face?
3. How can educators promote best practice through collecting evidence in the classroom?

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Universal Instructional Design: Accessing the Core Curriculum for Students with Blindness

David W. Hartman, *VTC School of Medicine; Department of Psychiatry and Behavioral Medicine, Carilion Clinic*
Tina Bhandari, *Department of Teaching & Learning, Virginia Tech*
Sara Chowdhury, *College of Science, Virginia Tech*

Abstract: The proposed presentation will review a blind student's lived educational experiences attending medical school from 1972 to 1976 and the various accommodations made during his training to become a physician. He will discuss the use of tape recorders, raised line drawings, models which contained balloons, and personal instruction. The discussion will also include the use of fellow students to assist in reading printed books, verbal directions during the cadaver dissections, and verbal descriptions of patient physical symptoms. The presentation will also focus on the 2013 learning environment and how accommodations can be helpful in the teaching of visually impaired students, as part of a general classroom experience. The issue not only of accessibility at a minimal level, but ease of accessibility will be addressed as critically important for visually impaired students to become high achievers. Instructional accommodations must be readily available in a timely fashion to any visually impaired student in order to access the core curriculum. There will be a description of how modern technology can be utilized in the classroom. Topics like how to render Power Point presentation accessible to the visually impaired student will be included among other challenges.

Literature Review

For the past 150 years, higher education institutes in the USA have struggled with and resisted change that would potentially include students from historically underrepresented, disempowered and oppressed groups. Among these groups are the students with disabilities. The resistance has been to access the core curriculum for students with disabilities. The transformation from traditional educational and social cultures borne on college campuses, higher education institutes have to be reconfigured to participate and engage in inevitable challenges to allow students with disabilities to experience college like their non-disabled peers [Aune, 1995; Silver, Bourke, & Strehorn, 1998]. Secondary instructional supports kept students with disabilities on the periphery of the core curriculum. Since educational practices and culture did not make sufficient change students experiencing 'otherness' were set up to fail with barriers to access curriculum resulting in lack of retention and decreased graduation rates. Statistically enrollment of students with disabilities into higher education institutes [primarily community colleges] may have tripled since 1970 but a 47% dropout rate as opposed to 36% of non-disabled students cannot be ignored [Henderson, 1999; NCES, 1999]. These attrition rates have been attributed to financial constraints, inadequate transfers from two-year programs to four-year programs, and access to curriculum and physical spaces [Dougherty, 2002].

The Center for Applied Special Technology [CAST, 2001] leads the field of UID to help shift paradigms for faculty in higher education. Faculty must have an understanding that UID is not extra work but the real work where non-disabled students also benefit from the same instruction. Within the context of multicultural and social justice education, UID is designed to address structural, curricular, and pedagogical inequities by shifting the focus from the individual to the systematic and global structural context. The student is not expected to overcome curricular obstacles through secondary instructional supports only as they keep student with disabilities on the periphery of the curriculum. Students with disabilities will be able to enter the core curriculum with faculty diminishing the concept of 'otherness' and increasing conversations and designs for all students [Nieto, 1999]. Moreover, navigating campuses and finding their place and space, the 'others' are already burdened with barriers for accessibility: Seymour and Hunter [1998] found students with disabilities in math, science and engineering majors spent more time advocating for their accommodations than the actual time spent on the class assignments. This implies added barriers for students with disabilities to access their secondary support services as well.

There is a powerful drive that allows students with blindness to access the core curriculum with or without the teacher providing that access. The supports are improving with the era of technology however true access is still work in progress. And as research and case studies are investigated, more precise systems of accessibility for students with blindness are developed and Universal Instructional Design is better served.

Methodology

This is an Autoethnography which contains and combines characteristics of autobiography and ethnography. As an autobiography the author assembles his thoughts recalling experiences through the people closest to him, his ghost writer, and two published papers. Remembered moments or ‘epiphanies’ are an integral part of his story perceived to have significantly impacted the trajectory of his life. Characteristics of the ethnographic portion will relate practices of higher education institutions trying to assimilate students with blindness while trying to understand effective teaching practices for best learning practices for these students. The author will relate the experiences of how his blindness developed his identity and will allow the outsiders [cultural strangers] to better understand the learning abilities of people with blindness, and help insiders [cultural members] to frame their own experiences around the learning tools and designs that have kept them on the periphery of the core curriculums.

The other two authors will inform and open discussion on present-day students with blindness and their academic experiences, framing those experiences with what higher education offer in this day and age under Universal Instructional Design [UID]. From research, they will show how far curriculum has been accessed from the periphery and the core as the distance is still in existence but decreasing.

Results

The attendees of the presentation will initially be engaged to give their experiences with students with disabilities and their perception of accessibility to the core curriculum. That discussion will shed light on current perceptions and attitudes to students with disabilities. Understanding the extent of access for students with disabilities will also be presented and discussed.

Discussion

Discussion will be approached by these questions:

- 1] Is UID fair instruction for all students?
- 2] Is there any class/course that cannot be made accessible?
- 3] If a student is feeling they are not able to access a lesson or mode of instruction is there immediate possibilities available?
- 4] Further suggestions

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Engaging Campus and Community: Developing Community Partnerships through Service-Learning

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Susan F. Clark, *Horticulture, Virginia Tech*

Abstract: Service-learning (SL) is teeming across institutions of higher education (HE) nationwide. Scholarly explorations of the theoretical underpinnings and practical implications of SL, as a form of civic engagement, is an emerging area of inquiry for post-secondary educators. The notion of an *engaged campus*, where educators transition from service “on behalf of the community” to a partnership “with community,” has increasingly entered into the civic engagement and SL discourses. In this presentation, we will examine recent literature and models of SL to demonstrate the praxis of developing “engaged” community partnerships in higher education. Presenters will provide participants with key concepts for building an “engaged campus” through SL, specific examples of SL from three university courses in the Civic Agriculture and Food Systems (CAFS) minor at Virginia Tech, and strategies to develop and incorporate critically-informed SL in their own pedagogy and curriculum. Participants will also engage in discussion to examine their individual SL and community partnership experiences.

Literature Review

Service-learning praxis is undergoing a shift toward the goals of community engagement in higher education (Butin, 2010). The scholarship of engagement in academia illustrates a revitalization of teaching, research, and service aims that reflect social and public good (Austin, 2010). According to Colby, Ehrlich, Beaumont, Stephens (2003), the purpose of higher education needs to be reengaged with a mission of “engagement” to better connect learners with social and academic goals, knowledge competencies with personal commitment, and university aims with larger world issues and problems. Glass and Fitzgerald (2010) describe three qualities inherent in the scholarship of engagement that could be drawn upon to reach such aims: First, engagement is scholarly; knowledge is created that benefits both academia and society. Second, engagement cuts across the mission of teaching, research and service; it cannot be separated from the core mission of institutions. Third, engagement is reciprocal and mutually beneficial; it is a systematic relationship between the university and the community in which it serves. These three qualities together provide a framework from which educators can develop pedagogy that takes them beyond the classroom and into the community for enhanced learning and social outcomes (Glass & Fitzgerald, 2010).

While growing in prominence, the meanings of service-learning greatly vary. The ambiguity in how service-learning is defined causes uncertainty in its goals and purposes. Within the spectrum of service learning, however, three standards remain constant, which include illustrating how the learning activity is legitimate, ethical, and critically useful for socially just ends (Butin, 2010). To that end, outcomes of service-learning are to prepare students to be responsible adults and competent professionals while being civically engaged within their communities. Benefits to the learner have been documented and show a gain of goodwill, but the benefit to the receiver of the service has much less documented success (Butin, 2010). The receiver’s benefits of service is an area where further exploration is needed, including evaluating the learning that is occurring within the community involved in service-learning curricula.

The historical mission of Land Grant Universities (LGU) aims to solve everyday problems and prepare students for a democratic citizenship (Colasanti, Reau, & Wright, 2009). The National Academies of Science (2009) have recently called upon institutions of higher education to promote civic engagement by way of developing and implementing experiential and service-learning programs. Sustainable agriculture programs in higher education are specifically responding to this call for engagement through curricula focusing on experiential learning and community-university partnerships (Niewolny et al., 2012). These programs are attempting to address many complex social and environmental problems, where progressive educators are blending theory and practice to develop environments where the student is the focal point of the process (Parr & Trexler, 2007). Thus, a focus on models of service learning and community-university partnerships from within post-secondary sustainable agriculture education is pertinent to shed light on the role of engagement in higher education.

Goals and Objectives

Goal: Through this session, participants will gain an understanding of the framework and strategies that reflect service-learning “best practices” that foster student learning, civic engagement, and community capacity.

Objectives:

1. Participants will be able to describe and facilitate the process of service-learning, whether short-term or long-term, with goals and objectives for student and community partner learning outcomes.
2. Participants will be able to create a service-learning opportunity that fits into existing courses, further connecting students experience to real-world issues and place-based problems.
3. Participants will gain understanding of engagement through the process of service-learning as a means of creating engaged campuses and communities.

Description of Practice

This practice session will serve as a brief introduction to the theory and practice of service-learning using an experiential learning and civic engagement framework. First, providing key concepts for building an “engaged campus” through SL literature, then facilitating a group discussion to develop an understanding of service-learning as it exists across disciplines, illustrating similarities and differences where it is occurring by examples provided by participants. Thoughtful reflection on the large group dialogue will occur in small teams, composed of participants from multiple disciplines, where current and/or desired practices and strategies are explored and critically examined. In a large group discussion format, presenters will conclude the practice session by sharing examples of service-learning and community partnerships from three courses within the Civic Agriculture and Food Systems Minor at Virginia Tech.

Discussion

Service-learning is becoming widely adopted in higher education as a means to engage students, faculty, and community with the institutions mission statement. A scholarship of engagement through civic participation can create space for traditional disciplined departments to connect the natural and social sciences through interdisciplinary collaboration. Collaboration on the part of faculty, students, and community partner stakeholders through service-learning experiences embedded in curricula articulates the need for real world situations where students learn through problem solving and grow into engaged citizens.

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Using Dialogic Inquiry in Higher Education

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Alia Sheety, *Graduate Studies in Education, Cabrini College*

Abstract: Recent research on adult learners suggests the importance of collaborative work in adult learning environment and its contribution to the creation of new knowledge and meaning. Dialogic inquiry is one way to achieve students' engagement and to stimulate the learning process. Participants in this practice session will experience three practices that promote the use of dialogic inquiry in higher education and discuss how each of the practices affects learning.

Literature Review

Vygotsky's (1978) social constructivist theory offers higher educators a *dialogic inquiry* that engages inquiry and expels boredom. This collaborative approach to learning prepares students to go from guessing to predicting within a learning activity without experiences shame and any feelings of deficit. Discovering and knowing to making meaning requires complimentary contributions of text, talk and inquiry, where scaffolding serves as fundamental tool for the learning apprenticeship (Koschmann,1999).

Feuerstein (1980) recommends three major criteria that promote *dialogic inquiry*; reciprocity, meaning and transcendence. Making meaning is key after the reciprocity of interaction and a purpose are established. Feuerstein suggests that learning becomes explicit as we work through the zone of proximal development. This makes the process critical. The ultimate goal of learning is to transfer it to other parts of daily living. Feuerstein calls this transcendence, others call it "*creation of knowledge*" and still others refer to it as *transformation*. Revealing a progressive discourse of activity and learning interspersed in time helps to clarify this process. The critical issue is how activities are purposefully chosen to demonstrate a sequence that has a ripple effect on learning.

There is a difference between how we approach learning and teaching in today's world. Technology provides a unique ability to access knowledge in an instant. There is no need any more for *banking* (Freire, 1970). In higher education we need to examine how, why and what we are teaching so that learning is maximized. Sheety & Rundell (2012) suggest professional learning groups as a method to engage adult learners in creating new knowledge. Gordon Well's (1999) speaks to *dialogic inquiry* as a predisposition for questioning, trying to understand situations collaborating with others with the objective of finding answers.

Goals and Objectives

Participants in this session will:

- Experience three different activities that involve *dialogic inquiry*
- Review information that explain and support *dialogic inquiry* in higher education
- Discuss how dialogic inquiry leads to higher levels of thinking
- Leave with three ways they can take back and implement in higher education settings

Description of the Practice

This workshop is a demonstration of how *dialogic inquiry* supports and facilitates higher education in meaningful ways. The presenters will describe the basic principles of *dialogic inquiry*, brainstorm topics with participants and demonstrate three different ways of implementing dialogic inquiry to the topics that are suggested. Participants will get a chance to go through the experience and reflect on it. Toward the end will discuss the process and how dialogic inquiry enhances meaning and understanding and most of all stimulates metacognition processes. A short description of the method and explanation of how it is implemented will be distributed to participants.

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Applying Gaming Principles and Open-Source Tools to Redesign a Graduate-Level Course

Theodore J. Kopcha & Ikseon Choi, *Learning, Design, and Technology, University of Georgia*

Abstract: There is tremendous potential to incorporate the principles associated with gaming into the coursework of graduate students. The purpose of this session is to present a course redesign that was based heavily on key gaming principles, including the use of badges, sub-games and secret areas, and autonomy over skill development. The course, offered using Google Docs and other Web 2.0 tools, offered a variety of activities that allowed them to ‘level up’ in the content areas of mobile learning, Web 2.0, and educational gaming. To date, the course was offered in two different versions – once with and once without a system of awards and badges. The session will include an overview of the collaborative efforts to redesign the course, a demonstration of the site and key activities, and a discussion of student reactions to the course from both versions.

Introduction

In Fall 2011, the Learning, Design, and Technology program at the University of Georgia sought to redesign a core course in their Master’s and Doctoral curriculum. The course, entitled 6150: *Introduction to Computer-Based Education*, was offered entirely online and introduced students to a wide variety of technology integration theory and practices in K12 and business environments. The course was redesigned in a way that updated the content of the course while making the activities within the course more appealing to both students within the college of education and other students outside the college. Thus, the focus of the course has been shifted to helping students to develop conceptual knowledge and skills in utilizing emerging technologies for their own learning as well as for their teaching and training.

Gaming Principles to Guide the Course Redesign

To achieve this goal, the course redesign focused on integrating principles of gaming into the course activities. Gee (2003) and Bonk & Dennen (2005) have noted that incorporating the principles of gaming into learning environments can be engaging and motivating for students, which can result in positive learning outcomes. Bonk and Dennen (2005) and Rosario and Widmeyer (2009) present a series of design principles associated with incorporating gaming elements into learning environments. These were adapted from Gee and present the game elements that make many Massively Multiplayer Online Games [MOOGs] successful. The six principles that were most relevant to our online learning environment are described below:

- Achievement – Learners are continuously rewarded for skill mastery and advancing their knowledge
- Distributed – Learners grow and learn through interactions with others, including technology
- Multiple Routes – Learners have more than one way to progress and learn
- Practice – Learners spend time practicing in an interesting context
- Probing – Learners engage in cycles of inquiring, hypothesis building, and ‘doing’.
- “Regime of Competence” – The challenges in the game should push learners outside of their current comfort zone in an attainable manner

Five Key Elements of the New Course

The revised course content focuses on three main trends in computer-based education – mobile learning, Web 2.0, and educational gaming. This content is covered in the context of the following five course elements that incorporate the aforementioned game principles.

- *Levelling up.* Figure 1 shows the four levels that learners achieve in the course, and the major projects during they must complete to ‘level up’. Each level gradually increases the challenges associated with learning and focuses the learner more narrowly on one of the three trends. Students negotiate their own learning path and gradually achieve mastery within one of the three trends. This incorporates the principles of: Achievement, Multiple Routes, and Practice.

- *Awards and Badges.* At the conclusion of each level, noteworthy projects or projects that went beyond the requirements were given awards for excellence. Badges were awarded when students contributed positively to the course outside of the required activities could earn recognition. Badges were only made available once a student discovered a ‘secret area’ in the game. Principles: Achievement, Regime of Competence.
- *Mini-games.* The main mini-game in the course was an ongoing trivia game on gaming and technology history (e.g. What game held the first Easter Egg?). The mini-game was played in synchronous meetings to encourage students to find the answer on Google and report it. Principles: Multiple Routes, Regime of Competence.
- *Learning with Technology Jam Sessions.* Learners regularly worked in small groups to share recent technology discoveries and applications in various contexts. Principles: Distributed, Practice, Probing.
- *A ‘Boss’ Level.* Games typically have a final challenge that requires students to use their recently acquired skills to defeat some sort of ‘boss’. In this course, students were challenged to develop, implement, and evaluate a learning activity in their area of mastery. Principles: Practice, Probing.

Level	4 C's (In-Class Work)	Gaming	Web 2.0	Mobile
I	Read / Watch Find 3 more resources Learning Jam Session	Read / Watch Find 3 more resources Summary / Reflect	Read / Watch Find 3 more resources Summary / Reflect	Read / Watch Find 3 more resources Summary / Reflect
Complete activities for all three topics				
II	Contribute new resources (TED, Blogs, Etc.) Learning Jam Session	Critique 3 tools Summary / Reflect	Critique 3 Tools Summary / Reflect	Critique 3 tools Summary / Reflect
Complete activities for two of the topics				
III	Application through topic-focused activities	Demonstration of 1 tool: Improve 1 (or more) of the 4Cs; connect to 1-2 articles.	Complete activities for one topic	ALTERNATIVE: Paper summarizing 8-10 academic articles about one topic.
IV	TIP – Group Project Design, Develop, and Field-Test your learning activity. Presentation: Storyboards (PPT summary of TIP - Problem, Solution with Technology including Theoretical Justification, Strategy, Plan, Results, Lessons Learned).			

Figure 1. Course learning plan containing depicting the activities associated with each ‘level’ achieved in the redesigned course, including the gradual increase in expertise as learners advance in levels (i.e. grey boxes), *Jam Sessions*, and the ‘Boss’ Level (i.e. Level IV).

Implementation and Discussion

The course was developed for delivery using open-sources tools, including Google Documents and other Web 2.0 tools, rather than our University-wide Learning Management System. Google Spreadsheets were customized to deliver private feedback to users. The course has been offered in two versions – once with and once without the *Awards and Badges* system noted above.

The full presentation will showcase the design and development process, demonstrate course features and mechanics (see <https://sites.google.com/site/ldtedit6150/>), and offer suggestions for designing and implementing course elements in other contexts around these principles of gaming. Student evaluations will be shared from both versions of the course to support ideas for implementation and improvement.

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Research Instruction Through Librarian-Faculty Collaboration Using Engaging Strategies

Ma Lei Hsieh, Melissa Hofmann, Pat Dawson, *Moore Library, Rider University*
Megan Titus, *English Department, Rider University*

Librarians at the Moore Library of Rider University provided research instruction tailored to class assignments to a second-semester sequence composition classes composed of freshmen and sophomores. During spring 2012, librarians collaborated with class faculty in engaging students to learn IL more intensely using different strategies in three experimental groups. The goal was to discover if students in these groups outperformed their peers in a control group on IL learning in order to gauge which teaching strategies are most effective in IL instruction.

In the Preview group, faculty assigned students to preview the Research Guides prepared for these classes and gave students a graded quiz. In the Active-learning group, librarian and faculty engaged students with an active learning component during the session. The Multi-sessions group received two instruction sessions on different assignments from two librarians co-teaching the sessions. Multiple follow-up sessions followed each instruction session to allow ample time for students to practice searching.

A different pretest and posttest were used for measuring student learning outcomes. Each test contained 10 multiple choice questions with multi-correct answers. The pretest was given to students prior to instruction. Classes including all the experimental groups returning for a follow-up session were given the parallel posttest.

The Preview group scored slightly higher than the other groups in both pre- and posttest but the differences were not statistically significant among the groups. All participants performed significantly better statistically on identifying a variety of sources than they are on searching effectively in the pretest; but in the posttest students improved significantly on search skills. Qualitative reflection by students on their learning added additional perspectives of learning outcomes to the pre/posttest findings. The authors will share the evolution of the assessment project including faculty collaboration using different instruction strategies, assessment instrument development and analysis of students' IL skills.

Literature Review

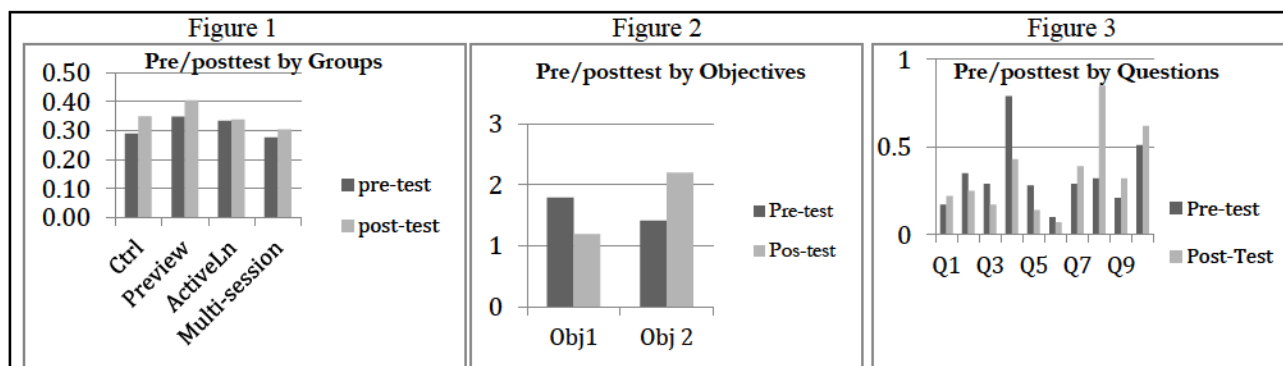
A literature search on the impact of pedagogies of information literacy instruction for the recent decade found a variety of approaches for IL instruction. Examples include Kraemer, Lombardo, and Lepkowski (2007), who compared the impacts among online, face to face and hybrid learning; Gross, Latham, and Armstrong (2012) who established an ASE module (Analyze, Search, Evaluate) for teaching IL; and Mokhtar, Majid, and Foo, who used the Theory of Multiple Intelligences, proposing a dynamic information literacy pedagogy that harnesses learners' interests (2008). However, limited evidence in the literature indicates a relationship between IL teaching methods and IL competencies.

Methodology

A different pretest and posttest were used for the assessment study. Each test contained 10 multiple choice questions with multi-correct answers. The questions addressed the first two objectives of the ACRL Information Literacy Competency Standards of Higher Education. The pretest was given to students prior to instruction. A typical research instruction session included five minutes of assessment and a combination of lecture, demonstration, and coaching during hands-on practice by librarians. Classes returning for a follow-up session were given the parallel posttest. Three experimental groups implemented different teaching strategies: the Preview group, the Active-learning group, and the Multi-sessions group. All three experimental groups took the posttest. Test scores are compared among the experimental groups and a control group. In the Preview group, faculty assigned students to preview the Research Guides prepared for these classes and gave students a graded quiz prior or shortly after the

library session. In the Active-learning group, librarian and faculty engaged students with an active learning component during the session. The Multi-sessions group received two instruction sessions on different assignments during the semester from two librarians co-teaching the sessions. Multiple follow-up sessions followed each instruction session to allow ample time for students to practice searching and get tutoring from librarians. The complicated statistics gathered for the study presented challenges for librarians to determine if the results were meaningful. Partnership with a Psychology faculty member enabled the librarians to compute higher-order statistics and gain more insight into the data and its potential importance for curriculum design.

Data Analysis & Results



The Preview group scored slightly higher than the other groups but no significant differences were found between pre/posttest for all the groups. No group differences were detected (Figure 1). Participants performed significantly better on Objective 1 (identifying sources) than Objective 2 (search skills) in the pretest but they improved significantly on Objective 2 (search skills) in the posttest (figure 2).

Overall, no significant differences were found between pretest and posttest but participants improved on some concepts: Truncation (Q8), combined Boolean connectors AND/OR (Q7), and on the purposes of using books (Q10). However, they also declined significantly on differentiating journals from magazines (Q4), and on locating the library’s journals (Q5). Students had low accuracy rate on the use of catalog (Q1) and on searching the catalog by subject (Q6) (Figure 3).

Discussion/Conclusion

Even with faculty engaging students in learning IL, students’ gains on one or two IL sessions are still limited. Students’ reflection of their writing and research processes may serve as additional means to measure their learning outcomes. More intense collaboration between librarians and teaching faculty and other strategies need to be explored to continue pursuing the best practice of effective teaching of information literacy to college students.

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Lessons Learned from the Formative Evaluation of Physics Recitation

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Abstract: Recitation is an integral part of many introductory physics courses. Facilitated by multiple, often less experienced, instructors such as Graduate Teaching Assistants (GTAs) in a smaller classroom environment of 40-45 students, the recitation is intended to provide students with additional practice and feedback in solving problems of physics. Our client, the physics department GTA supervisor at a large research institution, was interested in data-based recommendations for improving recitation. A formative evaluation was conducted over a 16-week period and was organized around four key questions. Five hundred and thirty five students from one Foundations of Physics' class were surveyed. In addition, three recitation instructors (GTAs) were observed leading their recitations and then interviewed. Evaluation findings led to significant recommendations to the physics department for refining and establishing a more pedagogically effective and engaging recitation.

Background

The traditional lecture method is a widespread method that has been used to teach physics for over one hundred years and almost every college and university physics instructor learned physics in this way (Saul, 1998). A traditional lecture physics course is often complemented with recitation and laboratory sections. Research has been conducted and instructional approaches have been developed to make the traditional recitation more engaging and collaborative. For example, the University of Washington has developed a set of instructional materials, *Tutorials in Introductory Physics*, intended to supplement lectures and textbooks, and adaptations thereof, such as *Activity-Based Tutorials*, have been developed at the University of Maryland. Another recitation method, *Cooperative Group Problem Solving*, which utilizes collaborative learning, has been developed at the University of Minnesota (Docktor & Mestre, 2011). However, according to Saul (1998), when instructors follow the traditional lecture method along with recitation sections, they often don't include support for how to build an expert-like understanding or expert-like problem solving skills.

At the research university reported on here, all majors in engineering, building construction, and chemistry are required to take the four credit hour "Foundations of Physics" sequence. This calculus-based sequence includes lectures, laboratory sections, and recitations. The recitations are taught by Graduate Teaching Assistants (GTAs) and are intended to help students understand concepts discussed during lectures and to facilitate interaction between students. Our client, the supervisor of the GTAs leading the recitations, was interested in a formative evaluation of the recitations to determine the degree to which they were meeting goals and how they might be improved. This work reports on the methods, findings, conclusions, and recommendations drawn from the evaluation.

Methodology

For this evaluation, three data collection methods and two data sources were used to support data triangulation (Russ-Eft & Preskill, 2009). First, three GTAs were observed leading three different recitations by the two evaluators. Second, 535 recitation participants were surveyed with 120 of those participants responding, a 22% response rate. Third, the same three GTAs that were observed were also interviewed. Data were analyzed using both quantitative and qualitative methods, resulting in descriptive statistics for the quantitative data as well as themes identified through constant comparative coding for the qualitative data (Glaser & Strauss, 1967).

Findings and Recommendations

For the purpose of this evaluation, four key questions served as a guide to analyze the data collected and to communicate the findings, which will be reported on in full during the presentation. Partial findings and recommendations on two of the key questions follow:

What is the purpose of the recitation sessions?

Of the 120 participants that completed the survey, 78 responded to this question. Some of the responses provided by the participants are coherent and have some similarities, while others are very different and inconsistent. The variation in responses suggested that students were not well informed of the purpose of the recitation. Unclear or uncommunicated goals can negatively impact learning (Gagne, Briggs, Wager, 1992). Thus, we recommended that students should be explicitly informed of the goals of the recitation so that they can understand where they are headed and be prepared to use their time productively. While 67% of students agreed or strongly agreed that the recitations help them to clarify ideas and concepts from the text and lectures, perhaps this percentage could be increased if recitation sessions were connected explicitly to learning goals common to all three learning resources.

How are the recitation sessions organized?

The recitation sessions are held once a week for 50 minutes. Each week, the GTA Supervisor creates a problem worksheet that is distributed to the students prior to the recitations. Students have the option of solving the problem(s) at home, turning in their work at the beginning of the recitation, and then leaving. Or, students can work in groups to solve the problem(s), asking questions as they proceed. Opportunities for such practice and feedback, including peer feedback, are vital to developing knowledge, skills, and expertise (Brill & Hodges, 2011; Gagne, Briggs, & Wager, 1992). Thus, we recommended that recitation instructors formalize and require a cooperative group learning strategy during recitations. We also recommended the inclusion of an explicit problem-solving strategy such as one influenced by the work of Reif (2008) or Schoenfeld (1994).

Conclusion

This evaluation project provided the opportunity for the GTA supervisor and GTAs to understand more clearly how the Foundation of Physics recitation was currently operating and being perceived by students and how it could be improved upon. Recitation, as one of the common elements of the traditional structure of Foundations of Physics, can play a greater role in student learning with the consistent integration of such important instructional elements as explicit goals, collaborative practice and feedback, and problem-solving strategies. Data-based decision-making processes, such as formative evaluation, can guide the way to targeted improvements.

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Wednesday

February 6, 2013

Session 5

3:50-4:40 PM

Presentations:

*What a Class on Zombies Can Teach Us about Strategies and Technologies
for Effective Multi-Disciplinary Teaching*
Jester, J., Beaudin, J., Harris, M., and Ernst, N.

*ScanTrons? We Dn't Nee' No Stnk'n ScanTrons:
i-Clickers, Testing, Cheating and Large Classes*
Lacoste, J.

Four Ways to Engage Any Class: Strategies and Empirical Evidence
Zakrajsek, T.

Authentic Teaching: Lessons from Instruction Librarians
Walker, C., and Click, A.

Creating Accessible Instruction in a Digital Environment
Asselin, S., and Cox II, L.

A Quick Guide for Teaching Academic Self-Regulation
Mokri, P., and Sherman, T.

Narrative Writing as a Student-Centered Approach to Learning the Process of Science
Lee, E.

*Are College Students' Textbook Reading and Instructional Preferences Related
to Their Self-Efficacy and Disposition?*
Skidmore, R., Conner, II, T., and Aagaard, L.

<http://www.cider.vt.edu/conference/>

What a Class on Zombies Can Teach Us about Strategies and Technologies for Effective Multi-disciplinary Teaching

Jason Beaudin, Amy S. Withrow, Richard S. Albright, *English, Harrisburg Area Community College*
Yvonne J. Milspaw, Matthew B. Harris, *Humanities, Harrisburg Area Community College*
Nicole L. Ernst, *Geographic Information Systems, Harrisburg Area Community College*
John J. Sygielski, *President, Harrisburg Area Community College*
JuliaGrace J. Jester, *Psychology, Harrisburg Area Community College*
Michael D. Nichols, *Teaching Technology Services, Harrisburg Area Community College*

Abstract: This practice session will explore how a group of nine faculty members across five disciplines and seven different specialties successfully developed and implemented a multi-disciplinary course called "Zombies in Contemporary Culture." The focus of this panel will be on the fundamental challenges in developing this course: transforming the apparently "trivial" (zombies) into an academically rigorous offering; leveraging emerging technologies to facilitate student learning and enhance the educational experience; and utilizing shared storage and communication solutions to coordinate large-scale collaborative endeavors between both faculty and students. The faculty members will discuss practical solutions to these challenges, along with an overview of technologies used effectively to increase responsiveness and collaboration in the course, and suggestions for using these resources in other ways. Time will be made available for sharing of ideas on how else to use these technologies for cross-disciplinary teaching and what other strategies and technologies might be useful, and for audience members to generate ideas on how to implement these solutions in their own teaching. Technologies utilized included Skype, Dropbox, Prezi, Podcasting, and shared space on a learning management system.

Literature Review

Despite traditionally entrenched divisions between areas of study, multidisciplinary courses are increasingly offered by institutions who feel that "world needs and opportunities are increasingly complex and require integrated, in-depth contributions from multiple disciplines for progress" (King, 2010, p.1). While the increase in popularity and implementation of multidisciplinary classes is undeniable, such efforts face considerable obstacles in logistics, particularly given the need for persistent communication between content experts to ensure academic rigor and rapid adaptation to meet unforeseen challenges. This is especially relevant when the breadth of the disciplines to be integrated is quite wide. The *Zombies in Contemporary Culture* course, upon which this presentation is based, involved a range of academic research and materials including individualism and collectivism (i.e. Forbes, Collinsworth, Zhao, Kohlman, & LeClaire, 2011; Triandis, Bontempo, Villareal, Asai, & Lucca, 1988), media studies on zombies (Bishop, 2009), research on infectious diseases (Meng & Berger, 2008), and classic stories written in reference to a time of plague (Boccaccio, 1358/1995). This can potentially make communication and collaboration a cumbersome process, as success requires "considerable planning" to overcome physical divides and diverse course schedules (Thomson, 2007). Recent studies of multidisciplinary collaboration have focused on addressing difficulties in communication and streamlining workflow (e.g. Comeaux, 2002; Bender, 2005). Current technologies can be used to promote successful communication between both faculty and students in multidisciplinary environments.

Goals and Objectives

In this session, several of the co-teachers from the *Zombies in Contemporary Culture* course at Harrisburg Area Community College will describe the processes used for successful and swift communication in a multidisciplinary course including the easily available technologies that were utilized as part of this process. Presenters will give examples of these communication and collaboration tools which include Skype, Dropbox, Prezi, Podcasting, and shared space on a learning management system. Many of these resources are free and can be used in a variety of ways to encourage communication both in multidisciplinary classes and in collaborations on service work. After the explanation and examples, time will be used for discussion of ways to apply these methods in participants' teaching and work environments as well as the sharing of additional ideas and suggestions for concrete methods of easing collaboration and communication.

Description of Practice

We handled the challenges of multidisciplinary collaboration by deploying a number of different technologies, both free and licensed, to facilitate our communication and work. We established a shared “chat” channel on Skype that is used by all faculty members for easy interaction and rapid, near real-time communication between professors in the course. A similar channel in Skype was established to allow students to interact with faculty members and their classmates: all course professors were placed in the chat, and students were encouraged to join this channel as well. We utilized shared storage spaces and programs such as Dropbox, Google Docs, Prezi, and a wiki (Campus Pack) to simplify our workflow, allowing multiple authors to work on documents across significant distances and despite scheduling conflicts; this allowed for a single persistent “newest version” rather than multiple edited emailed versions that must be merged. Ultimately, the various products of our collaborative endeavors were mediated in a shared course space that allowed faculty members to further augment course offerings by developing quizzes, assignments, and discussions, to construct a uniform, immersive and straightforward presentation of the content to the students. We also created podcasts around topics such as zombies in the media to allow opportunities for simultaneous connections across the disciplines. The face-to-face component of this blended course was augmented by a simultaneous virtual classroom space, moderated by a faculty member, in Adobe Connect (licensed product).

Discussion

Despite worries mentioned by a member of our teaching cohort that nine colleagues working on a single class would be the equivalent of “herding cats”, the patterns we established within this class made communication and responsiveness to student needs run quite well. Throughout the course, this level of communication allowed for a sharing of strengths and a dividing of work that enabled us to create an interesting and academically rigorous course. As many students know, group work can be an onerous though necessary task and in choosing to work together on such a complicated course, we took on something that could have been the worst group work activity ever. Instead, we found ourselves challenged and inspired to be more than the sum of our parts. Our hope is to continue to evolve and expand this collaboration in new ways, both in courses and in the other aspects of teaching: service and professional development.

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ScanTrons? We Dn't Nee' No Stnk'n ScanTrons: i-Clickers, Testing, Cheating and Large Classes

Jean Lacoste, *Accounting & Information Systems, Virginia Tech*

Abstract: As faculty are encouraged to embrace technology and budgetary constraints often force compliance, faculty must find technology that supports sound pedagogical practice, learn how to use that technology, and develop effective implementation procedures that are consistent with the faculty member's teaching style. Our University is in the process of phasing out the 1960's technology of bubble sheet assessments, leaving large class instructors to find a replacement that fairly and accurately evaluates students' learning, provides feedback in a timely manner, and minimizes the unethical behavior by examinees that can degrade the value of the assessment. This session will evaluate a modern alternative (a classroom response system) that provides similar advantages to the traditional bubble sheet along with additional rewards that personal digital technology can provide. Consideration is given to the complexities this technology can add to the testing process and the controls necessary to preserve the integrity of the assessment.

Literature Review

Fies' literature review demonstrates that classroom response systems (commonly known as clickers) can improve student learning when combined with sound pedagogical practices. (2006) Several studies have identified best practices for clicker use. (Beatty, 2004, Bruff, 2009) Still others have found that student perceptions of clicker use are generally positive. (Guthrie, 2004) Caldwell reports that 88% of students "frequently" or "always" enjoy using clickers in class. (2007) Most of these studies analyze the use of clickers to promote interactive learning and student engagement. If students and teachers have invested in this technology to support the learning process, why not use the same technology to support the assessment process as well? One deterrent is that clickers provide new ways for examinees to cheat. (Patry, 2009)

Goals and Objectives

In this Practice Session, we'll explore methods that may be employed to use clickers much like we've used bubble sheets for exams. We'll discuss potential benefits and develop procedures for addressing several challenges including the reduction of cheating.

Upon completion of this Practice Session, participants will be able to:

- Design procedural requirements for i-Clicker assessments with some combination of the following characteristics:
 - Multi-question
 - Multi-version
 - Multi-format
 - Self-paced
- Establish deterrents to cheating on assessments
- Develop contingency plans for technology failure
- Prepare students for the change in technology so that the testing method has little negative effect on test scores
- Discuss collateral impact on course elements other than the assessment component

Description of Practice to be Modeled

Clickers are often used to pose one multiple choice question at a time during lecture to encourage student engagement and increase interactivity. With the recent release of software to support self-paced polling, clickers can now be used for multi-question assessments without forcing the class to move through the exam at one group pace. The addition of LCD displays and buttons to support alphanumeric entry provide for a wider variety of responses and stronger identity controls. Clickers also provide new avenues for dishonest or confused examinees to deviate from the desired assessment process. In this Practice Session, we will examine how clickers can be used to administer various types of assessments while minimizing activities that might degrade the integrity of the testing results. We will conduct our examination by role-playing both teacher and student roles in various assessment situations. Procedures will be developed and tested for various kinds of assessments and common cheating scenarios. Practices for large classes often prove to be effective for smaller classes, however the reverse is often not the case. Therefore, we will approach our scenarios from a large class perspective.

Discussion

Testing with i-Clickers is comparable to testing with bubble sheets. There are a few challenges unique to i-Clickers (technology anxiety, one examinee/multiple clickers, sharing stored answers), but with advanced planning, these challenges can be overcome. Furthermore, i-Clickers offer several advantages over bubble sheets:

- Clickers can be used to gather answers to both multiple choice and short answer questions.
- Clickers can be used to collect a wider variety of identifying data during the assessment.
- Clickers reduce the paper consumed during an assessment and the labor associated with organizing that paper, which can be significant for large classes.
- Clickers are more modern than bubble sheets.
- Clickers used for testing purposes can also be used for polling during lectures to enhance student engagement and interactivity.

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Four Ways to Engage Any Class: Strategies and Empirical Evidence

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Abstract: Moving from “sage on the stage to guide on the side” is a common phrase, but how exactly should that be done? It may sound simple to “flip a classroom” or “turn the learning over to the students,” but really engaging students in the learning process can be daunting work. Adopting and adapting new pedagogical procedures should be done based on evidence rather than intuition, conjecture, or trial and error. In this session we will explore four basic strategies for improving student learning. Included will be solid teaching suggestions, along with solid research in the area of teaching and learning. Fear not, for these engagement strategies were specifically chosen so there will be plenty of time in your course to “cover the content.”

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Authentic Teaching: Lessons from Instruction Librarians

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Abstract: Librarians, like many scholars, often leave graduate school with little teaching experience or pedagogical training. Those who become academic librarians are immediately and regularly asked to teach information literacy sessions on conducting research and library resources, and can find themselves feeling unprepared and overwhelmed. Certainly the teaching experience of instruction librarians differs from that of faculty members, in everything from contact hours to course content. However, the lessons learned in library instruction sessions can often be applied to the traditional classroom, and the focus on authentic teaching benefits all types of instructors. This practice session will include discussion of deep modeling, transformative learning, and authenticity. Participants will learn about the use of these ideas in higher education pedagogy in a big picture context, work and learn in groups in order to apply these concepts, and take home a plan to develop individual authenticity in teaching.

Literature Review

As the result of a study that followed 22 faculty members for 3 years, and included interviews and classroom observation, Cranton and Carusetta (2004) identified five categories of authenticity: self, other, relationship, context, and critical reflection (p. 13). Inspired by this research, others have written about authenticity and developed more tangible ideas that are more easily applied to practice. For example, the four elements of authentic teaching include: “(1) being present in the classroom; (2) awareness and utilization of context; (3) active engagement; and (4) ownership of education for student-centered learning” (Knotts, Henderson, Davidson, & Swain, 2009, p. 188). Brookfield (2006) identified four indicators of authenticity that can be clearly implemented in the classroom, including congruence, full disclosure, responsiveness and personhood. Overall, the authentic teacher is (1) self-aware, (2) understands how others, such as students or colleagues, impact teaching, (3) carefully and purposefully builds relationships, (4) understands how the educational environment influences teaching, and (5) participates in critical reflection. In order to develop an authentic teaching voice, Cranton says that it is important to draw the connection between personal and professional growth and acknowledge that one does not happen without the other (2001, p.1). She also presents four kinds of “good teaching” and encourages teachers to explore how their authentic self best operates within these frameworks: the organized teacher, the caring teacher, the practical teacher, and the creative teacher (Cranton, 2001, p. 27).

Transformative learning is a concept that is integral to authentic teaching, and Cranton and Carusetta define it as “a process by which previously uncritically assimilated assumptions, beliefs, values, and perspectives are questioned and thereby become more open, permeable, and better validated” (2004, p. 6). Jarvis takes a similar, but highly theoretical approach, noting that human life is focused on learning and learning is focused on life – and increased learning leads to increased questioning (1992). It is not just students, however, who are transforming in the classroom, but teachers as well. The process of developing authenticity is transformative; “as people form and shape their sense of self, they naturally question those values and assumptions they had previously uncritically assimilated” (Cranton, 2006, p. 6).

Librarians teach students how to use the library and conduct their own academic research, and thus are in an excellent position to teach by doing. VanDeWeghe calls teachers demonstrating how they engage in the processes of reading and writing “deep modeling,” and notes that “telling while doing is especially important for those times when we are uncertain, when we are challenged by ideas, or when we face ethical dilemmas” (2006, p. 86). Research is a messy process, and it is not helpful for students to learn otherwise. In the library instruction classroom, and in classrooms all over campus, students benefit from less scripted teaching and more modeling of the ways that their instructors tackle tough or unfamiliar questions (Kohn, 2004).

Goals and Objectives

Upon completion of the session, participants will be able to:

- Define and describe authentic teaching and related concepts
- Explain the importance of the five categories of authenticity, and identify how they are relevant to their teaching experiences
- Develop strategies to increase authenticity in their own teaching practice
- Collaborate with others on campus to encourage authentic teaching, and learn from faculty members in other fields

Description of Practice

This practice session will begin with discussion of what it means to be an authentic teacher, and why this is important. Presenters will guide participants through self-reflective exercises in order to begin working towards authenticity. Participants will work in groups to discuss the five areas of authenticity and strategies for developing in each area. Participants will leave with a plan for cultivating authenticity in the classroom.

Discussion

In 2008, both Claire Walker and Amanda Click accepted positions as instruction and reference librarians in university libraries. Claire worked with a student body made up of mostly first generation college students in the American South, and Amanda with students that demonstrated widely varying degrees of English proficiency at a university in the Middle East. Although they both faced very different challenges related to the contexts in which they were teaching, they both found that developing authentic teaching voices led to confidence and improved teaching. Librarians tend to teach skills instead of content, and may not see a student in a formal classroom setting more than once or twice a semester. For these reasons, authentic teaching is particularly important and they learned a great deal in the library classroom that could benefit faculty from any field.

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Creating Accessible Instruction in a Digital Environment

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Abstract: Institutions of higher education are experiencing major shifts in pedagogy due to teaching approaches that focus on student centered learning. At the same time higher education is challenged to create accessible instruction for increasingly diverse students including those with disabilities, English language learners, ethnic minorities, and other forms of diversity including gender, class, age, employment status, family and work related responsibilities. The *Universal Design for Instruction* (UDI) framework offers faculty and curriculum developers with an opportunity to enhance access and deliver flexible learning strategies. Nine principles of universal design will be presented and aligned with specific methods, communication, student performance and assessment for instruction in digital learning environments.

Literature Review

Universal design acknowledges diversity of learners, and compliments flexible, innovative approaches and offers higher education faculty and curriculum designers with a model that promotes access, and participation to 21st century digital learning environments. Distance and online learning environments include electronic services - web pages, electronic materials, media, publications, simulations, games, social networking and online environments. Engagement in higher education and academic life are shaped by sharing and receiving information, learning, teaching, collaborating with others. Online and distance education programs provide access to learning for increasingly diverse student populations and offer more flexible learning environments. The US Department of Education (2011) reported that over 20% of undergraduate and graduate students in 2007-08 enrolled in distance education courses. Distance education courses that employ live or interactive audio or video conferencing, webcasts, videos, or internet, computer based management systems offer student opportunities for synchronous and asynchronous learning tailored to their needs.

One of the promising practices in higher education is the use of the *Universal Design* framework in planning and delivery of instruction. This framework for instructional design considers the environment and the learner including ALL students regardless of challenges due to disability, ethnicity, culture, age, class, gender or other life circumstances. The concept of universal design is rooted in the field of architecture as products and environments intended to be usable by all people, to the greatest extent possible, and without adaptation or specialized design (Universal Design Alliance, 2010). The principles of universal design for the built environment laid the foundation for universal design approaches in education.

Universal design principles include a) equitable use, b) flexibility, c) simple & intuitive, d) perceptible information, e) tolerance for error, f) low physical effort, and g) size and space for approach. These McGuire, Scott, & Shaw (2004) and Palmer, (2003) expanded these architectural and the built environment universal design principles to include two additional principles specific to the learning environment including: a) community of learners, and b) instructional climate. As faculty design courses the principles of Universal Design for Instruction (UDI) offer a framework for learning and teaching that address diverse needs of students. Instructional strategies are clearly student centered, and by anticipating student diversity, distance courses will not need to be retrofitted or adapted for individual students

Goals/Objectives

This session will provide higher education faculty and curriculum designers with a better understanding of the challenges diverse learners face in the digital learning environment and how universal design principles can create a more accessible, flexible model of instruction.

Description of the Practice

Universal instructional design involves anticipating varying needs and circumstances, respectful of diversity with high expectations for all learners. Intrinsic to this idea is that students can access course information and find it a fair and safe learning environment. Universal design is central to addressing student needs and at its heart is a commitment to remove barriers to accessing course materials, methods, performance and assessment thereby taking part in essential activities. Principles for Universal design are described in Table 1.

Table 1. Universal Design Principles.

UD Principle	Description
1. Equitable Use	Instruction is useful to and accessible to learners with diverse abilities. Identical or equivalent whenever possible.
2. Flexibility in Use	Users can choose from multiple means of access
3. Simple and Intuitive Use	The design allows for ease of navigation using a predictable format
4. Perceptible Information	Instruction is designed and delivered regardless of ambient conditions or student sensory abilities
5. Tolerance for Error	Instructional activities anticipates variable student learning pace and prerequisite skills
6. Low Physical Effort	Nonessential physical effort is minimized
7. Size and Space for Approach and Use	Participation in classroom activities is possible regardless of body size, posture, or mobility
8. Community of Learners	The environment promotes interaction, communication and exchange among students and faculty
9. Instructional Climate	Instruction is welcoming and inclusive; high expectations for all students

Scheer, Terry, Doolittle & Hicks (2004) in a synthesis of strategies for effective distance education reported instructional design principles which includes a) assess learner goals and instructional contexts, b) align clearly defined instructional objectives with learning outcomes, c) select media and materials appropriate to learner outcomes, d) provide opportunities for practice, feedback and interaction, e) design evaluation and assessment to address outcomes. The following strategies provide the foundation to align UD principles a) methods, materials and media, b) communication, c) student performance, and d) student assessment.

Discussion

A template that addresses each of the 9 universal design principles (See Table 1) and specific instructional strategies that reflect flexible, accessible instruction will be provided as a beginning point for interactive discussion. Participants in small groups will share effective instructional strategies techniques for a) methods, materials and media, b) communication, c) student performance, and d) student assessment, centered around the 9 principles.

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A Quick Guide for Teaching Academic Self-Regulation

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Abstract: Academic self-regulation is the result of personal action by learners to choose outcomes and success criteria, decide upon intellectual and behavioral actions to reach those outcomes, monitor progress as they pursue the outcomes, modify actions and success criteria as conditions change, control contextual, emotional, and volitional conditions, and persist to achievement. Because Academic Self-Regulation is clearly very complex, learners need instruction and support to use personal and environmental resources to achieve their goals. In this presentation, we describe a two component practical approach for teaching academic self-regulation skills and strategies and for creating learning environments that promote and facilitate learners' engaging in academic self-regulation.

Literature Review

Academic self-regulation has been shown to affect student achievement (Schunk, Pintrich, & Meece, 2008; Zimmerman & Schunk, 2001). Learners' ability to monitor thoughts, actions, and feelings is one aspect of academic self-regulation. Monitoring these elements within different learning environments is challenging because students' thoughts, actions, and feelings are affected by the beliefs that students hold about different learning tasks. Self-regulated learners are able to control their motivation and beliefs to pursue their academic goals (Boekaerts, 1997; Pintrich, 2000; Winne & Hadwin, 1998; Zimmerman, 2000).

Self-regulated learners select or create strategies for guiding cognition, controlling affect, and actions (Pressley & Woloshyn, 1995) while learner with poor self-regulatory skills begin an academic task without clear plans. These learners rely on their impulses and reactions to environmental feedback to enhance their learning instead. It is noteworthy to mention that the initiation and continuation of a task also depends on students' motivation, affect, and beliefs about the effectiveness of these goals along with their strategic planning and skillfulness in implementing the strategies that they have chosen (Zimmerman, 2011).

Our goal for this practice session is to equip instructors with an understanding of the characteristics and definition of academic self-regulation and the evidence-based cognitive, metacognitive, motivational, and environmental variables related to academic self-regulation. We hope that by introducing these constructs in a systematic way, we can increase participants' situational interest and provide them with skills to influence learners to engage academic self-regulation and to implement changes in their classrooms to encourage and support learners engaging in academic self-regulation.

The objectives of this session:

1. Participants will recognize the strategies and skills that learners can use to choose and apply academic self-regulation to achieve their academic goals.
2. Participants will identify actions they can take to increase the frequency and quality of academic self-regulation learners in their courses engage.

Discussion

Academic self-regulation is the gold standard of the ideal learner. These learners will identify their own goals and turn these goals into objectives that are the focus of cognitive and metacognitive actions to achieve mastery. Consider one student who is highly self-regulatory; she is focused on mastery, pursues understanding, monitors her successes, carefully chooses learning strategies, frequently tests her own understanding, reviews to ensure she has understood, and seeks help when faced with difficulty. In contrast, a lower self-regulated learner would accept an assignment as something to be completed rather than learner from, would "study" at the last minute for tests, relies wholly on tests to determine if she has learned, and blames "poor instruction" if she is not sufficiently successful. Instructors have two paths to influence learners' use of academic self-regulation. The first is to encourage learners to develop academic learning skills such as cognitive monitoring, reflection, evaluation, analysis, clarifying, and

organizing. As students mature as academic learners, they need to expand their repertoires of intellectual skills and abilities as well as their understandings of when and how to use these skills and abilities. We will demonstrate a sample of effective intellectual skills and strategies that characterize academic self-regulation and ask participants to engage in these skills. Equally, important we will provide participants with guidelines to promote their students to engage in effective learning skills and have participants practice using these skills. Finally, we will demonstrate important emotional and situational variables such as volition and context and how learners can create for themselves conceptual frameworks for choosing, applying, and evaluating the intellectual skills and strategies they use. A main message from this section of the session is that learners must decide for themselves the goals they wish to pursue and that their actions should be oriented to achieving these goals. Participants will respond individually and in groups to a series of exercises that illustrate these intellectual skills and strategies. The second path is to create contextual classroom conditions that support/encourage learners to engage in academic self-regulation. As a practical exercise, participants will be asked to consider their own classrooms and the instructional climate/context that they create. From this baseline evaluation, participants will be shown through a series of examples and illustrations practical and specific actions they can take to integrate academic self-regulation into their instruction.

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Narrative Writing as a Student-Centered Approach to Learning the Process of Science

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An increasing trend of student-centered approaches to science education has been witnessed in current higher education contexts (Biggs, 1996; Walczyk & Ramsey, 2003; Kim, Hannafin, & Bryan, 2007). One of the emerging student-centered approaches to science education is engaging students in writing (MacKenzie & Gardner, 2006). Writing in general has been widely recognized as a powerful tool to stimulate thinking and enhance science learning (Madigan, 1987; Moore, 1994;). In particular, narrative has been recognized as a heuristic way to understand everyday science (Wilson, 2001; Robinson & Hawpe, 1986) and the human endeavor of conducting scientific research (Clopton, 2011).

This study systemically examines ways to promote student-centered learning in science education in which students take responsibility for their own learning and learn the process of science by writing a research narrative. This mixed methods study brings rich data from both qualitative and quantitative sources to understand the students' experiences with this innovative student-centered way of learning the scientific process and how autonomy support played a role in engaging students in autonomous self-regulation in college-level, student-centered science environments. This study attempts to answer the following two research questions:

1. What are students' experiences when engaged in science research narratives in college-level, student-centered science learning environments?
2. To what extent do autonomy support, competence, relatedness, and autonomous self-regulation influence students' performances on the research narratives?

This study used a mixed methods design including student and instructor interviews, participant observations, document analysis, and quantitative surveys including Intrinsic Motivation Inventory, Self-Regulated Questionnaire, Learning Climate Questionnaire, and a generic student experience survey. This study took place in an upper level undergraduate/ graduate science course at a large state university in the southeastern region of the United States. 17 students participated in the survey, 7 students participated in semi-structured, in-depth, individual interviews. This study explored the students' experience engaging in a student-centered, research narrative project in which students individually interview a scientist whom they identify and write a narrative about the scientist and his or her research project.

Students in general did not seem to grasp the instructor's primary intent for this project, which was to understand the process of scientific research. In addition, students reported a great deal of difficulty in creative writing and conveying scientific information to lay audiences. Students requested additional guidance, such as a better explanation of what a narrative is compared to other forms of writing, specific page limits, more pertinent examples of science narratives, and previous student examples. Among the current guidance and resources provided, students found the instructor's feedback on the first draft and the opportunity to revise most useful. Most students found peer review helpful and addressed the feedback received from the instructor and the peers in their final drafts. Rubrics and the instructions provided in the syllabus were frequently visited and used. Students' recommendations to improve future offerings revolved around providing more guidance on creative writing, more specific instructions, more detailed rubrics, page limits, relevant and realistic examples, and more time for peer review.

While students enjoyed the level of autonomy they exercised in choosing a scientist based on their personal, academic, and career interests, built a positive relationship with the researcher, and felt some level of competence in their ability to complete the research narrative project, students' levels of engagement varied in the student-centered approach to investigating the scientists' research. Students' experiences of autonomy, relatedness, and competence as well as their perceived autonomy support from the instructor did not influence students' performance on the research narratives. Autonomous self-regulation had a marginal effect on the students' performance. It can be inferred for this class at this time that students' experiences of autonomy have some positive influence on their motivation to do well on the research narrative project as well as in their autonomous self-regulation to participate in the course.

Engaging students in writing a research narrative holds the potential for teaching the process of science while students have meaningful conversations with a scientist about his or her lived experience of conducting scientific

research, conduct a student-centered inquiry into the scientist's research project, and communicate their science knowledge to a lay audience. The findings from this study inform science educators and instructional designers in the education community the systemic design and implementation of narratives as a way to teach the processes of science and promote student-centered learning in science education.

Are College Students' Textbook Reading and Instructional Preferences Related to Their Self-Efficacy and Disposition?

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Abstract: The purpose of this study was to investigate the relationship between academic self-efficacy, dispositional optimism/pessimism and preferences regarding the use of text materials and in-class activities of college students at a university that serves one of the highest-poverty regions in the United States. A sample of 105 students was surveyed. Results indicated that sample students who had below-average self-efficacy were less likely to engage in learning strategies that would lead to academic success, such as reading the textbook assignments, but dispositional pessimism within self-efficacy groups seemed to be related to a higher likelihood of reading the text. Preferences for in-class instructional strategies differed depending on students' self-efficacy and disposition. Results imply that a variety of strategies should be employed in order to encourage best learning across all students.

Literature Review

Self-efficacy can be conceptualized as encompassing not just the relationship between effort and results in given tasks, but also as the individual's belief in their ability to be successful at said tasks (Bandura, 1977; Wood & Bandura, 1989). Scheier and Carver (1992) assert that optimism-pessimism mediates expectancies of success. People who are optimists hold positive expectations for future events and outcomes; pessimists hold negative expectations for future events and outcomes (Scheier, Carver, & Bridges, 1994). Previous research has indicated that life-orientation (i.e., dispositional optimism –pessimism) is related to the study habits of college students and the final grade attained in a course (Authors, 2010).

The self-regulated learner is described as exhibiting self-efficacy, intrinsic motivation, and a learning goal orientation, having developed higher-order cognitive and metacognitive awareness, skills, and effective learning and study strategies (Zimmerman & Martinez-Pons, 1988). Self-regulated learning is predictive of academic achievement and success (Zimmerman, 1986; Zimmerman, Bandura, & Martinez-Pons, 1992), and is related to optimism-pessimism (Schunk & Zimmerman, 1994).

Given the findings of previous research and the conceptual foundations of characteristics found to be associated with academic success, the purpose of this study was to investigate the relationships among self-efficacy beliefs, student dispositions (i.e., optimism-pessimism), and student preferences regarding the use of text materials and in-class activities.

Methodology

This study employed a convenient cluster sample of 105 students taking summer classes at a regional university in the mid-south. Sixty-one percent of respondents were female and nearly 100% were Caucasian. They reported 29 different majors, with the highest concentrations being education (17%), biology-related (13%), and agriculture-related (10%). All years of college were represented

Participants were administered a 25-item researcher-designed survey that included 11 items regarding use of course textbooks, 11 items about preferences for use of class time, and four demographic items. The 19-item *Self-Efficacy for Learning Form – Abridged* (SELF-A) (Zimmerman & Kitsantas, 2007) was employed to gauge student academic self-efficacy. Participants also completed the Revised Life Orientation Test (Scheier, Carver, & Bridges, 1994) containing six scored items to assess their generalized outcome expectancies / dispositional optimism. Researchers requested permission from course instructors across campus to administer the surveys to their students in the last 15 minutes of a regularly scheduled class period.

Descriptive statistics were run on all survey items and totals. Subjects were divided into four groups based on their total self-efficacy scores and pessimism scores. Cross-tabular frequency tables on the study survey items were run for those groups, with chi-square statistical analysis, and the results were inspected for descriptive trends.

Results

Some of the descriptive results are displayed in Table 1 (all will be available in the full paper and presentation). Taken individually, there were some statistically significant chi-square tests, but no p-value met the Bonferroni-adjusted alpha for the total number of tests conducted. The trends were instructive, however.

Table 1
Selected Study Survey Results for Self-Efficacy/Disposition Groups

	High Self-Eff. / More Pess. (n=28)	High Self-Eff. / Less Pess. (n=29)	Low Self-Eff. / More Pess. (n=31)	Low Self-Eff. / Less Pess. (n=17)
Should <u>NOT</u> be required to read text before class	11%	10%	26%	41%
Actually read textbook assignments	68%	59%	45%	29%
Would read text if there was an in-class quiz	74%	90%	61%	65%
Would read text if had open-book online quiz	30%	52%	65%	35%
Prefer group presentations over individual presentations	73%	41%	74%	75%

Discussion

Results indicated that the best ways to encourage the most students to read the textbook seemed to be testing over text material that was not discussed in class; giving shorter reading assignments; having students fill out a reading study guide for credit; and giving in-class quizzes over the textbook content. Employing a mix of lecture, in-class group activities, group presentations, and individual presentations would give all students a chance to learn from one of their preferred classroom strategies.

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Thursday

February 7, 2013

**Presentation
Sessions**

<http://www.cider.vt.edu/conference/>

Thursday

February 7, 2013

Session 6

9:00-9:50 AM

Presentations:

Understanding Basic Concepts of ePortfolio Pedagogy and Choosing the Best Technology
Blevins, S., Zaldivar, M., and Summers, T.

Creating Opportunities for Collaboration Across Programs in 3D Immersive Virtual Worlds
Howard, B., and Tashner, J.

Neuroscience Research Implications for Higher Education Pedagogy
Sturm Anderson, P., and Anderson, D.

*Enhancing Student Motivation Using Self-Determination Theory:
Practical Applications for the Online Environment*
Epps, S., and Barton, A.

Flipped Out: Successful Strategies for Improving Student Engagement
Nolan, M., and Washington, S.

Graduate Advising Matters: Role of Students in Fostering Effective Advisor-Advisee Relationships
Nakamura, A.

A Framework for Utilizing Scaffolding in Higher Education
Park, H., and Choi, I.

What Happened to My Class? Facilitating Teaching and Learning in a Merged Classroom
Swayze, S., and Jakeman, R.

<http://www.cider.vt.edu/conference/>

Understanding Basic Concepts of ePortfolio Pedagogy and Choosing the Best Technology

Samantha Blevins, Marc Zaldivar, & Teggins Summers, *Learning Technologies, Virginia Tech*

Abstract: Electronic portfolios evolved from a longstanding tradition of portfolio use for student reflection on learning and authentic assessment, as well as showcasing of professional skills and accomplishments. Because ePortfolios represent pedagogical *processes* that serve many different purposes, they can often be difficult to define and describe. Moreover, because technologies and ePortfolio platforms evolve at a rapid pace, the complexity of ePortfolios can be compounded when educators seek to choose the best technology for facilitating portfolio pedagogy in and out of the classroom. This session provides a brief overview of the pedagogical uses for ePortfolios, as well as a survey of the various technologies available for accomplishing ePortfolio-related goals. Presenters will share a wide variety of ePortfolio examples and lead participants through discussion and interactive opportunities to choose platforms that best meet their needs and goals. Participants will have the option to leave with a written action plan for how they may implement ePortfolios in their classes or programs, including the technologies that will work best for them. Additional resources will be provided that include information sharing the pros/cons of a multitude of ePortfolio platforms.

Literature Review

Portfolios in educational settings are certainly not a new concept. Many disciplines, including English, art, and education, have made portfolios integral to their pedagogical process for years (Devanney & Walsh, 2002, Greenberg, 2004, Weimer, 2002); however, a number of technological innovations, as well as specific trends in academic and programmatic assessment, have brought ePortfolios to the forefront of recent discussion in higher education.

Like traditional portfolios, electronic Portfolios (ePortfolios) contain students' work collected over time (Hutchings, 1990). They foster dialogue and "interaction with teachers, mentors, peers, colleagues, friends, and family" (Greenberg, 2004, p. 30). This process and resulting product provide a context and opportunity for student reflection and revision and results in behaviors that are related to deep learning. The key difference between traditional and electronic portfolio is the use of technology to store, organize, retrieve, and share a variety of information, including artifacts of learning, audio/visual files, and student reflections. In an ePortfolio, "all artifacts have been transformed into computer-readable form. An electronic portfolio is not a haphazard collection of artifacts...but rather a reflective tool that demonstrates growth over time" (Barrett, 2000). Trent Batson (2012) discusses the ways in which ePortfolios enable learning, and he identifies twelve technology trends for ePortfolios in education, demonstrating that the ePortfolio market continues to evolve in order to support the growing needs of the community.

The selection of an ePortfolio platform can be challenging, as different technologies can be used to support the needs of the ePortfolio creator. The technology selection should not occur, however, until the creator decides on the purpose of the portfolio, either learning, assessment, professional development, or some combination of these purposes. Many attempts have been made to identify effective ePortfolio platforms and match them to pedagogy and purpose. In 2011, the Electronic Portfolio Action Committee (ePAC) surveyed campuses in higher education to learn reasons for adopting ePortfolios and criteria in considering platforms, listing ease of use, portability, cost, flexibility, and functionality across disciplines as the top five reasons (<http://epac.pbworks.com/w/page/12559686/Evolving%20List%20of%20ePortfolio-related%20Tools>).

Goals and Objectives for the Practice Session

The main objective for this session is for participants to have a clear understanding of the ways ePortfolio pedagogies can enhance teaching and learning and to gain knowledge of the various ePortfolio technologies available. By the end of the session we anticipate participants will:

- Gain a better understanding of how ePortfolios can be used to promote learning, assessment, and professional development.

- Consider ways they might implement such processes within their own curricula.
- Learn of the technologies and ePortfolio systems/platforms available.
- Develop a plan for implementing portfolios within their curricula and select the technologies that best meet their objectives.

Description of the Practice to be Exemplified

Presenters will demonstrate the ways ePortfolio practices enhance learning (i.e., reflection, self-assessment, active learning, and multimodal learning); facilitate authentic assessment; and promote professional development, both in terms of developing professionally and as portfolios pertain to showcasing skills and accomplishments. During the session, a wide variety of ePortfolio platforms will be showcased. Time will be devoted for discussion of the ways in which various ePortfolio activities can be implemented within a variety of technologies and ePortfolio systems. Participants will have the opportunity to discuss and complete a worksheet that develops an action plan for implementing ePortfolios within their own curricula. Finally, participants will have the opportunity to complete a scaffolded framework that will help select the best technology/ePortfolio system to meet participants' goals and objectives.

Discussion

Available portfolio platforms include everything from Virginia Tech's supported collaborative learning environment (i.e., Sakai/Scholar) to vendor supplied systems (i.e., Digiication, TaskStream), as well as free, cloud-based options (i.e., Google Sites, Weebly). However, in order to choose the best platform, one must have a clear understanding of needs, goals, and objectives of an ePortfolio. There are many systems that are excellent at meeting learning or assessment or professional needs and it is a commonly accepted fact that there is no one system that excels in all three areas at the same time.

Faculty understanding of the pedagogical uses of ePortfolios is critical, as well as their consideration of how they will implement the portfolios within their courses, programs, and institutions. Once faculty understand their pedagogical needs, they can then evaluate the technologies available to best meet their criteria. As part of our discussion, we will explore and offer a scaffolded process for faculty to consider how they would use portfolios within their own curricula. We will also provide resources for participants, describing the functionality of a wide variety of ePortfolio and web-based systems. The frameworks we provide will give faculty a sense of the advantages and disadvantages of various portfolio technologies and will lead them through a scaffolded experience where they can decide on the best technologies to meet their goals and needs. An example of a framework we would discuss comes from Helen Barrett's (2012) rubric entitled "Category of ePortfolio Authoring, Publishing, and Assessment Tools" (<http://electronicportfolios.org/myportfolio/versions.html#category>).

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Creating Opportunities for Collaboration Across Programs in 3D Immersive Virtual Worlds

Barbara B. Howard & John H. Tashner

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Abstract: The use of online environments among colleges and universities has skyrocketed over the past several years. Various platforms offer diverse delivery methods with the intent of providing convenient, affordable access to courses. This session offers an exploration of strategies to expand online student learning and increase interactive engagement through the use of social media and 3D immersive virtual worlds. Use of these strategies and platforms allows instructors from different fields to collaborate by bringing their students together to work on complex issues. Students from across wide geographical areas can meet online to hold discussions, explore relevant web-based resources, and create documents to address problems posed through real-world simulations. The simulations are designed to immerse students in a practical application of theories of change and leadership such as they will most likely face in the roles for which they are preparing. Participants will engage in discussions on these instructional strategies grounded in the theories of presence pedagogy, transformative learning, and constructivism. Results from student surveys, postings on Facebook, and reflection papers will be shared. Participants will examine examples of student-generated assessment rubrics and final projects and engage in small group discussions.

Literature Review

Student isolation tends to occur in online courses when the primary interaction is between the student and the instructor, particularly when the interaction is asynchronous (Cox & Cox, 2008). Grounded in the learning theory of social constructivism, presence pedagogy occurs when levels of interaction in 3D immersive virtual worlds encourage the active exchange of ideas (Bronack, Riedl, & Tashner, 2006; Jaffer, 2010; Jaramillo, 1996). Active exchange of ideas may challenge student thinking when issues raised and problems posed do not fit with their current paradigms. Often shaped by a specific field of study or discipline, these paradigms become reshaped through engagement with those outside the field who may contribute ideas geared toward solving the problem from a different perspective (Johnson, 2008; Mezirow, 1997; Taylor, 2008). Immersing students from diverse backgrounds and fields into simulated situations allows this type of interaction to occur on a sustained basis by connecting individual experiences, challenging existing paradigms, and creating deeper meaning applicable to real-world situations (Annand, 2011; Beaudoin, 2012; Hurt et al., 2012; Malita, 2011). Self- and peer-assessments along with instructor feedback tend to provide the necessary scaffolding to promote the desired learning outcomes (Palloff, 2009). The addition of social media can lead to even greater interaction beyond the boundaries of course meeting times and assignments. Most students are familiar enough with the Facebook format that it can provide a relatively unthreatening forum for the exchange of ideas (Hurt, et al., 2012). When used as an instructional tool for communication of ideas and sharing resources, Facebook can provide a valuable tool for exchanging ideas and establishing networking that may well extend beyond the duration of the course or program (Malita, 2011).

Goals and Objectives

This practice session will focus on developing increased awareness, knowledge, and skills of participants in the following areas: (a) use of social media such as Facebook in connecting students and instructors across programs and disciplines; (b) use of 3D immersive virtual worlds for engaging students from across programs and disciplines in “real-time” conversations, presentations, and activities; (c) collaboration among faculty members to develop strategies involving students beyond their own disciplines; and (d) engagement of students in simulated projects online that may mimic their future roles in schools and other organizations.

Description of Practice

School leaders must collaborate by sharing the unique perspectives and insights gained through their fields of administration, technology, and curriculum to solve problems in their schools. This project developed with the intent of preparing students from these diverse areas to effectively lead schools by learning the skills of collaboration. This session will describe a project in which four cohorts of graduate students representing the programs of Curriculum &

Instruction Specialists, Instructional Technology Facilitators, and School Administration were brought together to explore the complexities of change. Each student was assigned to a small reading group composed of two to three students representing different cohorts. The reading groups were assigned specific books to read and discuss outside class through online meetings. Additional online class meetings in a 3D virtual immersive world environment enabled students from these cohorts to participate in such activities as The Change Game and to attend guest speaker presentations. Students posted regularly in a restricted Facebook page to share resources and ideas generated through their small group discussions, outside readings, and coursework. In addition to the readings, participation in the small groups, and postings each group submitted a final collaborative project in which they shared a “big idea” for implementing a significant sustainable change in schools. Student-developed participation and project rubrics provided self- and peer-assessment. Surveys and reflection papers assigned by instructors provided additional individual accountability for learning. Tools for assessment and their outcomes will be shared.

Discussion

Student learning depends on high levels of engagement with as much relevant experience within their field as possible. This project investigated strategies that will result in preparing students to more fully meet the challenges they will face in their future roles. As part of this challenge for our students, we met the challenge as professors in breaking down our own paradigms developed from years of submersion in the theories and bodies of research within our own fields. Getting past those barriers required frank discussions and willingness to release control over our students. The trust that developed as a result has transferred to our students who demonstrated a growing respect for those in leadership outside their specific fields of study. The hope is that this will transfer as they enter their chosen professions. The lessons learned and the resulting strategies may be applied well beyond the scope of educational leadership at either the graduate or undergraduate levels.

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Neuroscience Research Implications for Higher Education Pedagogy

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Dennis M. Anderson, *Leadership Studies, Marshall University*

Abstract: In the past decade, developments in neuroscience research, medical imaging technology, and cognitive psychology have greatly advanced our understanding of how learning occurs in the brain. These advances have led to the development of the new field of educational neuroscience. While this field has already influenced primary and secondary pedagogy, it is not widely known or understood in adult education. This presentation will summarize current literature about how the brain learns on neural and bio-chemical levels, as well as the neural substrates involved in different types of learning. The authors will also summarize the pedagogical implications suggested by educational neuroscience experts. Participants will then engage in a guided discussion about relevancy of these suggested pedagogical implications to adult education. Participants will also discuss how these pedagogical considerations can be translated into instructional techniques.

Objectives

Upon completion of the session, participants will be able to:

1. Describe how neurons and neural networks in the brain store and retrieve information.
2. Describe the neural substrates involved in different types of learning, such as rote learning versus mathematical reasoning.
3. Discuss the pedagogical implications of educational neuroscience on adult education pedagogy.
4. Consider the implementation instructional techniques based on educational neuroscience.

Description

This presentation summarizes educational neuroscience literature that describes how the brain learns. Included in this summary is a discussion of what is known about learning at the cellular level, from biochemical reactions to the establishment of neural networks that constitute memory. Additionally, the different functional areas of the brain and the role they play in learning will be reviewed. From this neuroscientific discussion of learning processes, the authors will summarize the pedagogical implications found in the literature of educational neuroscience. The authors will then lead a discussion on whether these pedagogical implications are relevant to adult education. Implications identified by participants as relevant will be recorded and displayed. From the list of those pedagogical implications identified as relevant to adult education, the authors will ask participants to identify instructional techniques that might be employed address the implications.

Discussion Questions

1. The literature of educational neuroscience suggests pedagogical changes in instruction. Which of these should be considered for application in adult education?
2. Having identified the pedagogical changes that seem appropriate for adult education, how could these be translated into instructional techniques?

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Enhancing Student Motivation Using Self-Determination Theory: Practical Applications for the Online Environment

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Abstract: In this practice session, we will discuss Self-Determination Theory (SDT) and how it applies to students in online classes. Then, using Ryan and Deci's (2002) framework, we'll provide examples of technology- and online-based methods we have used to increase students' sense of autonomy, relatedness, and competence and then involve participants in brainstorming instructional strategies that can be used in online courses to encourage use of the principles of SDT.

Literature Review

In online courses, which require strong self-regulatory skills from enrolled students, successful delivery depends upon maintaining student motivation (Bennett & Monds, 2008). Without face-to-face contact, students can more easily disengage (Sansone, Fraughton, Zachary, Butner, & Heiner, 2011).

Students' subjective value of learning goals impacts their motivation levels; multiple goals can result in competing or complementary motivational levels (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010). For example, students may take a class to satisfy familial expectations, prepare for a future career, and out of sheer interest in the topic, reflecting a range of external and internal influences on motivation. Harnett, St. George, and Drone (2011) determined that online learners come to classes with complex blends of motivational levels, ranging from *external regulation* (completing an activity to gain a reward or avoid a punishment) through the increasingly autonomous levels of *identified regulation* (completion because the activity has personal value), *integration* (completion in order to satisfy a sense of self), and *intrinsic motivation* (completion for the reward of doing the activity; Ryan & Deci, 2002).

Ryan and Deci (2002) suggest that the most autonomous form of motivation, intrinsic motivation, is closely linked to satisfaction of the human needs of autonomy and competence, and more distally, relatedness; further, as more autonomy is provided in an environment, motivation will reach increasingly autonomous levels (Ryan & Deci, 2000). Chen and Jang (2010) have empirically demonstrated that, directly and indirectly, an online context that supports these human needs can impact student motivation.

Given the direct and circumstantial evidence that meeting students' basic intrinsic needs of autonomy, competence, and relatedness can improve motivation, online instructors are challenged to find efficient methodologies that meet these needs through electronic communications.

Objectives

Upon completion of the session, participants will be able to describe the three elements of Self-Determination Theory and explain how each element contributes to student motivation. They will also be able to use SDT to develop and/or recognize effective instructional strategies and to apply these instructional strategies within an online environment.

Description of Practice

We will begin the session with an open question about what motivational issues instructors encounter in online instruction. We will move on to discuss collaboratively what attendees hold as goals for their students, and what they believe students' own goals are. Within that framework, the Self-Determination Theory of motivation will be introduced and described. Using the theory, we will explain and/or brainstorm possible reasons for common instances of student motivational break-down. Next, we will share strategies we have employed in an attempt to provide students with a sense of autonomy, a sense of competence or efficacy, and a sense of relatedness or connected inclusion. Following that, we will have the participants work in small groups to brainstorm other

activities or learning experiences that address the three basic human needs outlined in SDT, and those small groups will then pick one or two of those to share with the larger group.

Discussion

Although we as online instructors teach within different fields of study, we encounter similar situations regarding student motivation or amotivation, which impacts their active engagement in the learning process. We believe that, while it can be a challenge for us as instructors and often will require more instructional effort, it is possible to create learning environments that offer students the opportunity to develop autonomy, a sense of competence, and a feeling of connectedness to the instructor and others in the course. With these instructional elements in place, students should theoretically develop more autonomous levels of motivation, which in turn should lead to deeper and more engaged learning, and to see a relationship between the material and their world.

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Flipped Out: Successful Strategies for Improving Student Engagement

Matthew A. Nolan, *Allied Health, Southwest Georgia Technical College*
 Summer S. Washington, *Psychology, Southwest Georgia Technical College*

Abstract: Many benefits can be linked to the flipped classroom technique. Teachers often remark that there is not enough time to teach the content in class and they often become frustrated by time constraints. The flipped class is a tool that gives teachers more time in class to work through problems, answer questions, and spend quality time with students as they work through the learning process. TechSmith (2012) noted that the flipped classroom results in more “homework getting done, student grades improving, and more time spent one-on-one with students developing higher order thinking skills and engaging in richer learning experiences.” One school in Michigan noted a 20-40% improvement in student grades, as well as a 66% improvement in student behavior due to the increased time of one-on-one instruction and improved relations between the teacher and student (TechSmith, 2012).

Literature Review

Information Technology Services at Penn State defines “flipping the classroom” as “a pedagogical concept that replaces the standard lecture-in-class format with an opportunity to explore concepts and to review materials from outside of class” (Penn State, 2011). The term comes from the idea that a typical classroom has historically been a place where content is delivered through some sort of lecture format. In this typical classroom, homework assignments are given for the student to take and complete outside of class on their own. The new idea “flips” this typical classroom where the majority of the content is now obtained outside of class on their own, while homework, assignments, and problems are worked through collaboratively during class. Many styles of “flipping the classroom” exist and there is no one right way to use this idea. In fact, most agree that lecture still holds a place in the classroom when appropriate, but the focus on lecture is significantly decreased during classroom time. One science teacher in Indiana, Brian Bennett, (Makice, 2012) noted that the flipped classroom is an ideology rather than a methodology and remarks that it is about “making connections with learners and differentiating your instruction.”

Jackie Gerstein (2012) described the flipped class as a “place to work through problems, advance concepts, and engage in collaborative learning.” Dan Berrett (2012) discussed the idea of “Flipping” the higher education classroom and how it can improve traditional lecture and student learning. He noted that flipping describes the “inversion of expectations in the traditional college lecture.” This newly termed style includes interactive engagement, just-in-time teaching, peer instruction, and placement of course content on the student. Students are required to get most course information outside of class by listening to recorded lectures, podcasts, or by reading on their own. This contrasts the standard lecture style course where students typically come to class ready to absorb information and then to practice that information by completing homework assignments.

With tough economic times, it is difficult to decrease class sizes and faculty-student ratios in order to allow for more personal instruction. The flipped classroom allows all available class time to be devoted to this individualized instruction and assists in resolving the push for individualized instruction without increased funding. Jonathan Bergmann and Aaron Sams (2012) outline numerous reasons for why the flipped classroom is beneficial:

- Flipping helps busy students because it is more flexible.
- Flipping helps struggling students because more individualized attention can be given.
- Flipping helps students of all abilities excel because students can watch the videos as much as they want or as little as needed.
- Flipping allows students to pause and rewind their teacher.
- Flipping increases student-teacher interaction.
- Flipping changes classroom management because distraction is not a problem when students are engaged.
- Flipping makes your class transparent so anyone can see what is going on.
- Flipping is a great technique for absent teachers.

The flipped classroom can have a large impact on higher education when it comes to student learning. The largest gains tend to be in the area of student engagement, which is an area that most educators want to improve. Engaged students retain a higher rate of information than non-engaged students, with 90% retention of things that we “say and do” compared to only 10% retention of what we “read” and 20% retention of what we “hear” (Makice, 2012).

Goals and Objectives for the Practice Session

As a result of this session, participants will be able to:

- Differentiate between a flipped class and traditional class
- Describe the benefits of a flipped classroom
- Explain one way to flip content in their own class

Description of Practice to be Exemplified

Participants will be given a brief overview of the flipped class model and how it is different than traditional classroom settings. A brief sample lecture will be delivered in the traditional format followed by the same information which will then be delivered using an interactive, flipped method. Participants will engage in learning activities throughout the flipped model presentation. Following the demonstrations, participants will divide into groups and discuss the pros and cons of the flipped classroom model, and later share their results with all participants. After group discussion of the flipped model, participants should be able to describe many of the benefits of the flipped model. At the end of the session, random groups will be formed and each person will develop at least one aspect of their own class that can be flipped, which will then be shared and discussed with all participants. Handouts will be given to all participants that outline the basic premise of the flipped model along with a resource list to use.

Discussion

Flipping the classroom can have many impacts on higher education. Students learning in this environment will begin to more effectively educating each other, and begin to take control of their learning. Research in the area of flipped classrooms indicates that when these techniques are utilized the result is more learning (Bergmann, & Sams, 2012). In addition, student-learning outcomes are better because students are more engaged with the content. The flipped classroom increases student engagement and fosters higher order thinking when students are forced to apply the information to a variety of scenarios. To flip your class, Spencer, Wolf, and Sams (Makice, 2012) recommend beginning with the end in mind and setting a goal based on what you want the student to be able to know and do. After the goal is set, the next step will be to gather quality learning resources specific to the course needs that can be available outside of class at any time. Finally, one should structure class time by putting the content to context through learning activities. With these steps followed, a flipped class will evolve where students are more engaged and develop higher order thinking skills.

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Graduate Advising Matters: Role of Students in Fostering Effective Advisor-Advisee Relationships

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Abstract: Graduate advising and mentoring affects graduate student professional development and outcomes. With the increase in multiculturalism and other forms of diversity in higher education, the challenges of the advisor-advisee relationship continues to rise. While faculty advising is essential for graduate students' success, graduate students should also take initiative in improving the effectiveness in graduate advising and mentoring. Therefore, this practice session will describe a series of seminar/dialogues in which the presenter introduced the topics on fostering effective graduate advisor-advisee relationships. A total of five sessions were offered during the past academic year, and approximately 70 graduate students, mainly from science and engineering fields, attended. At each seminar/dialogue, one or two senior faculty, a graduate school ombudsperson, and a mental health counselor were available as resources. Key concepts from the seminar/dialogues and feedback received will be shared with participants. Also, tips used to facilitate the seminar/dialogues will be addressed.

Literature Review

Advising is teaching, and developmental advising is “concerned with facilitating the student’s rational processes, environmental and interpersonal interactions, behavioral awareness, and problem-solving, decision-making, and evaluation skills”(Crookston, 1972/1994). Both Crookston (1972/1994) and Lowenstein (2005) emphasized a student-centered relationship, which is to promote student independence and self-direction, so that students are capable of achieving success in their education. Crookston also pointed out the reality of the role of advising on campus. Advising might be seen as peripheral to teaching for many faculty, whereas students often believe that faculty are in charge of the relationship (Crookston, 1972/1994). Despite this reality, academic advising is defined as “integral to fulfilling the teaching and learning mission of higher education”(Gordon, 2008).

Academic advising can be beneficial because advisors can help students plan academic careers and serve as an academic resource. With increased mobility worldwide, issues of diversity and multiculturalism have intersected in graduate advising/mentoring (Schollosser, 2011), which affects students' educational experiences and also satisfaction and persistence. Thus, advising not only matters for retention rates but also matters for productivity (Lowenstein, 2005). Although advising and mentoring play a vital role in student professional development and affect the success of graduate students, the subject of graduate advising has not been well examined (Schollosser, 2011). While graduate advising styles and methods differ across the disciplines, a philosophy of advising and mentoring can be applied throughout graduate education

Objectives

This practice session is to describe a series of seminar/dialogues on the role of graduate students in fostering effective graduate advisor-advisee relationships. Upon completion of the session, participants will have gained, in a way that will improve graduate advising/mentoring:

1. Recognition of the function of seminar/dialogues for graduate students, with one or two senior faculty, a graduate school ombudsperson, and a mental health counselor as resources.
2. Awareness of the importance of self-advocacy/motivation, compatibility, and communication in relationships between advisors, advisory committee members, and advisees.
3. Sensitivity toward diverse backgrounds in graduate advising/mentoring.

Description of Practice to be Exemplified

This presentation is devoted to strengthening the role of graduate students in the advisor-advisee relationship. Advisors/mentors and advisees share responsibility for ensuring productive and rewarding advising relationships. Hemwall and Trachte (2005) state “Academic advisors should view students as actively constructing their understanding of the mission of the institution, including concepts like becoming responsible citizens, liberally educated persons, and critical thinkers”. Thus, graduate students must act as active learners because both parties contribute to the success of advising and mentoring.

Key concepts that will be introduced are the following. First, the presenter addresses the importance of self-motivation and self-advocacy of graduate students in building effective advisor-advisee relationships. Also, it is essential to know their advisors' expectations without making any assumptions. Next, different issues in the early and late stages of obtaining graduate degrees change are addressed. At early stages in the adviser-advisee relationship, it is critical to build trust relationships and to know each other's expectations. At later stages, senior graduate students should demonstrate independence and develop more of "peer-to-peer" relationships with his/her advisor. Third, the challenge faced by both faculty and graduate students due to differences in cultural communications is addresses. It is important to obtain sensitivity toward diverse backgrounds in multicultural society, which could help graduate students communicate with their advisors, and also future peer collaborators. Thus, fostering interactive and dialogistic communication styles would promote understanding between graduate students and their advisors along the entire path of their relationship. Both the faculty and students would feel less stress, which would enhance the focus on research, possibly increasing productivity. In addition, graduate students are both protégé of faculty and mentors to the undergraduate students they teach. Because the graduate advisor-advisee relationship is a model on how to advise/mentor, by improving it, other mentorships can be also improved, thus enriching both undergraduate and graduate students' educational experiences and development.

During this presentation, the presenter will recount her experiences organizing seminar/dialogue sessions on advisor-advisee relationships for the graduate students at Virginia Tech. Five sessions were offered during the past academic year, and approximately 70 graduate students, mainly from science and engineering fields, attended. In the seminar/dialogues, one or two senior faculty, a graduate school ombudsperson and a mental health counselor were available as resources, and the presenter facilitated the program and helped guide the discussions between them. During the seminar/dialogues, graduate students could share their honest fears and concerns because those faculty and counselors were not either their advisors or advisory committee members.

Immediately after the seminar/dialogues, surveys were conducted. Survey results showed that the most of graduate students found the seminar/dialogues beneficial, and they appreciated faculty participation. Hearing faculty's experiences and perspectives helped the students look at their issues from different angles. Additionally, students recognized the importance of knowing each other's expectations in the advisor-advisee relationship, and they also found it valuable to hear from graduate students in different disciplines. A follow-up survey was conducted 6 months after the first seminar/dialogue to assess the value of the session "downstream." Even after 6 months, 100 % of respondents either agreed or strongly agreed with "I gained awareness of the importance of maintaining communication with my advisor." Also, 88% of respondents agreed or strongly agreed with "I have been able to use the insight gained in this session to improve communication with my advisor."

Discussion Questions

1. Do you know your advisors' expectations? Does your advisor know your expectations?
2. How do you start a sensitive/difficult conversation with your advisor?
3. What could your institution do to promote effective advisor-advisee relationships?

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A Framework for Utilizing Scaffolding in Higher Education

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Abstract: Since Wood et al. first defined scaffolding, the idea of scaffolding has been expanded by numerous researchers. The purpose of this article is to provide real examples and guidelines for utilizing scaffolding to promote learning outcomes in higher education settings. Specifically, this study aims to identify types of scaffolding studied in higher education for the last decade and discuss the effectiveness of each type of scaffolding in the studies. In the first section, the three criteria for classification of scaffolding—sources, modes, and purposes—are presented based on previous ideas of scaffolding. Using this framework, we analyzed previous studies to provide guidelines for instructors.

One of the purposes of education is to improve students' problem solving skills, so that they can solve the problems which they face in their daily lives by themselves. Despite the importance of problem solving, previous studies have frequently investigated students' lack of problem solving skills or their ability to apply their acquired knowledge to an authentic situation. In order to enhance students' problem solving skills, scaffolding or external aids are needed in the process of transferring their knowledge to a real world situation. Scaffolding can improve the effectiveness of learning by being provided at the right moment. Since Wood et al. first used the term scaffolding in education, the notion of scaffolding has diverged in various ways, and its meaning has become somewhat diffuse (Pea, 2004). The purpose of this study is to offer instructors some real examples and guidelines for utilizing scaffolding to promote effective learning outcomes by critically reviewing the existing studies.

Theoretical Framework for Typology of Scaffolding

Selection Criteria

The existing studies were selected in the Social Sciences Citation Index (SSCI) journals by using the electronic database Web of Science using the keyword "scaffolding" or "scaffold" in higher education settings. Existing studies published between 2000 and 2011 were selected. As a result, about twenty studies on educational effectiveness of scaffolding in higher education were retrieved.

Criteria for Classification of Scaffolding

Scaffolding can be classified into human and nonhuman scaffoldings. Human scaffolding refers to the support provided by more knowledgeable human sources such as teachers, tutors, and peers (Wood et al., 1976), while nonhuman scaffolding means the support provided by tools such as paper-based materials or computer-based software (Jonassen 1999 as cited in Cho & Jonassen, 2002). Scaffolding also can be classified into two modes. Verbal scaffolding literally refers to assistance with verbal communication, and nonverbal scaffolding refers to assistance without words. The third criterion that classifies scaffolding is purpose. The initial research on scaffolding was designed to support students' cognitive processes of searching, collecting, organizing, integrating information, and generating solutions in order to achieve given learning goals (Wood et al., 1976). Hmelo et al. (2001) and Davis and Miyake (2004) contributed to the broadening of the purposes of scaffolding to include supporting learners' engagement in learning tasks. In addition to cognitive and emotional support, scaffolding can function as metacognitive support, which means a thinking guide during learning (Hannafin, Land, & Oliver, 1999). Metacognitive scaffolding is crucial in education considering the fact that this is intended to assist students in regulating their thinking during learning.

Preliminary Analysis: Typology of Scaffolding

Based on the three criteria for classification of scaffolding—sources, modes, and purposes—, about twenty empirical studies on scaffolding were classified. Research findings show that human scaffolding is appropriate for providing timely support, whereas nonhuman scaffolding is effective in dealing with students' anticipated difficulties (Saye & Brush, 2002). Through verbal scaffolding, learners can improve their understanding of the learning content and integrate the inquiry process with the subject matter (e.g., Azevedo et al., 2008; Kyza, 2009). Through

nonverbal scaffolding, on the other hand, learners can reduce their cognitive load to a greater extent than through verbal scaffolding by demonstrating the learning contents via graphs, diagrams, or pictures (Hmelo et al., 2001; Kyza, 2009). Regardless of its purpose, all kinds of scaffolding performs as cognitive scaffolding. Specifically, cognitive scaffolding leads to improved understanding of learning content, more effective decisions, and more meaningful learning experiences in a variety of domains and tasks (e.g., Hadwin & Winne, 2001; Kyza, 2009). The number of studies which have reported on the effectiveness of metacognitive scaffolding is relatively inconsequential. These studies recount that metacognitive scaffolding is essential for having ownership of students' learning. (e.g., Azevedo et al., 2008). Also, a small number of researchers have focused on emotional support which can facilitate learners' motivation. Considering the fact that the ultimate goal of scaffolding is self-regulated learning, ensuring that students can perform a task without any external assistance (Lajoie, 2005), students should be supported to engage in learning tasks cognitively, metacognitively, and emotionally (Hadwin & Winne, 2001). Therefore, not only cognitive scaffolding but also emotional and metacognitive scaffolding are crucial in educational settings.

Discussion

Whereas numerous studies examine scaffolding in education, few guidelines on how to select and utilize appropriate scaffolding exist. This study aims to provide comprehensive guidelines with practical examples for utilizing adequate scaffolding that is well-suited for its educational goal. Specific guidelines and practical examples based on the review of further research will be offered in the presentation.

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What Happened to My Class? Facilitating Teaching and Learning in a Merged Classroom

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Abstract: In the spring of 2011, two formerly closed cohorts were merged into one for the purpose of taking a doctoral statistics course. The purpose of this study was twofold – to observe how the formerly closed cohort students learned in this new environment and to develop faculty competency in teaching cohort students that have experienced a change in learning environment. We conducted a qualitative research study focused on student perceptions of their learning experience and communication during the spring 2011 statistics course. Results indicated that most students perceived that the merged course experience had a negative impact on their learning and that communication was affected as well. Our discussion offers faculty suggestions for classroom pedagogy that seek to enhance classroom facilitation and learning among students.

Literature Review

Cohort models are a logical choice for adult learners for enhanced learning in the classroom. At the core of cohort-based education is that small groups of students take courses with each other throughout the degree program. Numerous researchers have found that cohort-based education has benefits for adult learners including: providing a collegial support system that enhances the teaching and learning process for adult learners (Barnett & Muse, 1993), increased development of critical thinking skills (Chairs et al., 2002), improved academic achievement (Basom et al., 1996), development of an enhanced knowledge base (Norris & Barnett, 1994), opportunity to examine one's own knowledge (Tisdell, 2004), motivation to learn more (Brooks, 1998), as well as the bonding experience, high frequency of communication, and deep relationships that result from a cohort are associated with benefits to learning and teaching (Maher, 2001).

Methodology

This qualitative study is based on students' perspectives of this learning experience as informed by a social constructivist theoretical framework. The advantage of using this particular theoretical perspective is that we were able to explore this dynamic and complex phenomenon from the experiences of learners as constructed and communicated by the participants themselves. The specific research question for this qualitative inquiry was: How do doctoral students in two closed cohorts describe their learning experience and student-to-student communication when an unscheduled course merge occurs? Both cohorts were "closed" cohorts in that they had taken courses independently of each other on a predetermined scheduled prior to the course merge.

There were 15 doctoral students in the merged statistics course. Cohort alpha (comprised of 11 students) started the doctoral program in the Fall 2010 semester. Students of this cohort were generally mid-level managers in higher education administration in both community colleges and four-year colleges and interested in pursuing senior-level administrative positions. Cohort beta (comprised of 4 students) started the doctoral program in the Fall 2011 semester. Similar to cohort alpha, cohort beta members hold similar vocational status and goals. All 15 students were invited to participate in the interview-based study. Six of the 11 students in cohort alpha agreed to participate in the interviews and all four students in cohort beta agreed to participate. The six participating cohort alpha students were similar to their five colleagues who did not choose to participate. The resulting sample was evenly split between the two gender groups. These 10 students were interviewed after the first cohort weekend of the merged course and then again after the conclusion of the merged course. The first semi-structured interview protocol consisted of 16 questions – the interviews lasted from 20 – 50 minutes. The second semi-structured interview protocol consisted of 10 questions and lasted 15 – 30 minutes. The following is a sample of interview questions: 1) Last cohort weekend, you experienced a merged cohort experience. Please describe the experience from your perspective; 2) Would you say that your cohort's behavior changed? Both sets of interviews were transcribed verbatim. The qualitative data analysis utilized a first and second cycle coding method. Using this process we developed open codes to identify and trace ideas and constructs, as well as theoretical codes to track and link constructs found in the data. Two cycles of coding allowed for patterns in the data to be recognized, reflected upon, and re-integrated.

Data Analysis and Results

Data analysis resulted in two themes: 1) negative impact on the learning environment, and 2) stagnation in student-to-student communication. As one student aptly stated, “I think it was a distraction. I think that it interfered with our group dynamic. If I were to anticipate how it may have changed, I think that knowing how we handle ourselves during a class session as a cohort you’ll find us to be much more interrogative, much more delving and seeking answers. . . . generally I think it had a dampening effect on our level of inquiry.” The study findings indicate that a merged cohort changed the nature of the physical environment and affected student communication patterns within the classroom. Student integration across cohorts did not occur to an expected level and influenced student learning. In order to connect research to practice, we offer the following suggestions for pedagogy in a mixed cohort environment. These suggestions are useful for novice and senior faculty assigned to cohort-based courses.

- 1) Hold merged classes in a new “ownership-neutral” classroom location. Because our participants described the power of ownership within academic spaces, students’ perceived value around specific classroom spaces associated with past experiences. If one group is always in a designated space, it will be important to introduce the newly formed group to a new “ownership-neutral” space.
- 2) Continually use social induction activities like “ice breakers” each class period to meaningfully re-introduce students to each other. Adult learners, who often contend with work schedules, family commitments, and community responsibilities in addition to academic responsibilities will benefit from activities that reintroduce peers and build connections as a part of the classroom pedagogy.
- 3) Provide curricular opportunities for students to work together across cohorts to increase their level of comfort and communication. Faculty can create classroom discussion and assignments that purposefully introduce students and ideas in an incremental and developmental method that will allow students to adjust to new members of their academic environment.
- 4) Outside of the structure of specific classes, Faculty should use Blackboard’s Discussion Board, Community Groups, or Wiki Tool to create larger online communities and discussion that is academic program specific, or research-focused. This macro-level community building among students places cohort-specific classes within the context of a larger Program-goal or research focus notwithstanding cohort identification.

Discussion/Conclusion

Cohort-based education is a proven pedagogy for adult learners and will remain a common element in institutions of higher education. As more faculty members are exposed to cohort-based classroom environments, our research provides practical applications that could be influential in mediating the affects of changing learning environments and peer-to-peer interactions. Faculty members can benefit from additional training on the various pedagogical methods that shape learning. We offer four practical techniques for faculty teaching within mixed cohort classrooms as a means to start a discussion around this topic.

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Thursday

February 7, 2013

Session 7

10:10-11:00 AM

Presentations:

Using Social Media to Extend the Walls of the College Classroom
Domizi, D.

Making it Personal: Classroom Lessons Learned from a Community-Based Program
Newbill, P., and Kilkelly, A.

*Designing Instruction for Multi-Leveled Learning in Undergraduate/K-12 Outreach Programs:
A Panel Discussion*

Magliaro, S., Baum, L., Brand, B., Kasarda, M., Simonetti, J., Peebles, J., and Rosenzweig, M.

From Pedagogy to Andragogy: Best Practices for an Engaged Learner
Lubin, M.

*Flipping Higher Education: Using Video Prep Lessons to Change
the Classroom Learning Experience*
Dove, A.

There's More to Teaching than the Content: The Need for Study Skills Lessons
Jester, J.

*Using Visual Imagery to Improve Performance and Enhance Flow:
Is the Effort Worth the Reward?*
Rakes, L., and Jones, B.

*Personality Pad: Online Multisource Feedback for STEM Students
Enhances Academic Performance*
Pappas, J.

<http://www.cider.vt.edu/conference/>

Using Social Media to Extend the Walls of the College Classroom

Denise P. Domizi, *Center for Teaching and Learning, University of Georgia*

Abstract: When our students leave our classroom, how often do they see evidence and examples of our discipline in the world around them? While they are surrounded by opportunities, it can be difficult for students to see and recognize these connections. At the same time, most educators agree that extending the classroom walls by bringing such an awareness to the forefront would help students gain a greater understanding of the discipline. Social media can encourage students to see the world through a different lens by 1) allowing students to immediately share what they are seeing, hearing or thinking without having to wait until the next class meeting; 2) giving students opportunities to see and comment on what others are seeing, hearing or thinking; and 3) fostering dialogue. This session will look at different social media tools such as Pinterest, Twitter, Google+, Delicious, Facebook, and Wikis and consider what types of learning goals these tools can support.

Literature Review

Students are surrounded by opportunities to extend the classroom walls by connecting their everyday experiences and observations outside of class to learning that happens within the walls of the classroom (Domizi, in press). Though most of us would love for our students to become more aware of these connections, it can be difficult to bring such an awareness to the forefront because individuals are often unaware of their own learning, particularly in less formal environments (Heimlich, 2005). Social constructivists believe that a great deal of our learning happens as we interact with our environment (Derry, 1999; McMahon, 1997) through “experiences, observations, and interactions with other individuals” (Rovai, 2007, p. 77). Dewey (1916/1997) proposed that our thoughts were incomplete until we expressed our ideas to others, and that without the presence of others we would have no reason to reflect.

The challenge is how to accomplish these goals: to extend the classroom walls by helping students see evidence and examples of our discipline in the world around them, to bring awareness to the forefront, and to share and discuss their ideas and observations with others.

Social media has been defined as, “web-based and mobile applications that allow individuals...to create, engage, and share new user-generated or existing content, in digital environments through multi-way communication” (Davis III, Deil-Amen, Rios-Aguilar, & Gonzalez Canche, 2012, p. 1). Social media has a number of affordances to enable wall-busting interactions: it allows students to immediately share what they are seeing, hearing or thinking—what Schon (1983) calls *reflection in action*—without having to wait until the next class meeting; it gives students opportunities to see and comment on what others are seeing, hearing or thinking; and it allows for dialogue between classmates and with the instructor.

Goals and Objectives

In this session, participants will

1. share ideas, successes, and challenges they have faced regarding extending the classroom walls (with or without social media).
2. explore different ways to use social media based on the goals they have for their students, and ways to support and scaffold those students.
3. leave with practical ideas for how to extend the walls of their classroom in order to promote deeper learning, foster classroom community, and strengthen the connections students make to the content through an awareness of the world around them.

Description of Practice

This session will look at how instructors can use social media tools such as Pinterest, Twitter, Google+, Delicious, Facebook, and Wikis to first model and then promote an awareness of connections between class content and the world around them. Discussion topics for the session might include how to introduce the tool to your class, how to

model the types of interactions you would like to see, and how to merge the outside-of-class conversations with in-class discussions to promote continuity and community.

Participants will have the opportunity to discuss their own experiences and challenges of using social media, and will work individually or in small groups to develop a plan to incorporate social media in their own classroom. The session will end with participants sharing their ideas.

Discussion

Several years ago, frustrated by the long break between weekly class meetings with my students in a graduate teaching seminar, I created a class assignment “designed to promote immediate reflection and to encourage you to look for connections between what we are learning and discussing in our class, how this relates to your practice as an instructor, your ideas about teaching and learning, and your experiences in life in general.” Students used Twitter to extend class conversations, share resources, and communicate both professionally and socially between class meetings (Domizi, in press). Since that time, I have used a number of social media tools with my students and have worked with many faculty and graduate teaching assistants to find appropriate technology solutions to their pedagogical challenges. As with all technologies in the classroom, the best strategies are grounded in the pedagogical problem or goal; technology—and in this case, social media—is merely a tool to help solve a problem.

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Making it Personal: Classroom Lessons Learned from a Community-Based Program

Paula B. Newbill, *Department of Foreign Languages and Literatures, Virginia Tech*
Ann Kilkelly, *Department of Theatre and Cinema, Virginia Tech*

Abstract: This presentation examines personal experiences gained from a community-based performing arts program for refugee and immigrant adolescent females. Participants will find the college classroom lessons gleaned from the program instrumental in building community in their own classrooms through the incorporation of sensitive issues, group work based on student choice and interest, and story circles.

Background and Literature Review

This presentation showcases classroom methods derived from the presenters' personal experience with a refugee and immigrant performing arts program for adolescent girls called Sisters of the Circle. Two major themes emerged when recounting time spent with the group and reviewing interview transcripts and videos:

1. **Sensitivity:** Many of the refugee girls had been through war and had even lost close family members before living in refugee camps then being relocated to the U.S. Sensitivity is imperative when facilitating a group of young people who lived traumatic events (Ezzedeen, 2008; Sheppard, 2010).
2. **Autonomy:** The girls in the community-based program wrote and edited almost all of the dances, songs, and skits in the performances. Self-determination theory posits that intrinsic motivation occurs when people experience autonomy (Ryan & Deci, 2000).
3. **Relationships:** The exchange of funds of knowledge must be just that, an exchange (Moll & Greenberg, 1990). Through the interviews, the girls expressed that they liked the performances about their cultures more than the recent ones where less of their heritage dances, songs, and experiences were exhibited. The girls wished to share their culture with all members of the group.



Figure 1. Liberian girls of Sisters of the Circle at a local festival where they performed.

Goals and Objectives

Goals for participants of this session include identifying and implementing controversial issues for their subject matter as discussion topics through group work and story circles. Participants will gain knowledge of classroom teaching strategies gleaned from a multicultural community-based project and how it affected the classroom practices of the presenters. Specifically, participants will:

- Discover ways to propose and sensitively manage controversial discussion topics
- Brainstorm effective grouping strategies according to student choice
- Practice the story circle method



Figure 2. Sisters of the Circle participants telling stories at their end of the year performance.

Description of Practice

Dr. Newbill and Dr. Kilkelly, the founder of Sisters of the Circle, will relay how working with these young women impacted their classroom teaching in a positive manner. They will reveal through video segments, interview excerpts, and personal accounts what aspects of working with Sisters of the Circle specifically affected their teaching. Dr. Newbill will focus on the nature of the girls' personal histories and how she broached controversial topics in a senior capstone course at a small liberal arts college. She will also give examples of how students formed groups by choosing topics of their own interests. Dr. Kilkelly will highlight the personal nature of story-telling in Sisters of the Circle and how relationships were formed using a similar method in her university course.

Discussion

Through group discussion of controversial topics, such as repression of African nations, disabilities, and familial issues in her capstone class, Dr. Newbill's students commented that they had never gotten to know students in their other classes at a college of 2,000 students than they had in this one (Hirschberg & Hirschberg, 2008). For her university course, Dr. Kilkelly observed that her students were able to share more in the intimate setting of a story circle (Leonard & Kilkelly, 2006). The presenters' hope is that the presentation participants will not shy away from controversial topics and relationship building activities so that their students may have a more meaningful classroom experience.

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Designing Instruction for Multi-Level Learning in Undergraduate/K-12 Outreach Programs: A Panel Discussion

Session Moderator: Susan G. Magliaro, *Educational Psychology, School of Education, Virginia Tech*
Panelists: Liesl Baum, *Institute for Creativity, Arts, and Technology*; Brenda Brand, *Teaching and Learning*; Mary Kasarda, *Department of Mechanical Engineering*; John Simonetti and Josh Peebles, *Department of Physics*; Mike Rosenzweig, *Department of Biological Sciences*
Virginia Tech

Abstract: The national mandate for universities to support K-12 public schools in the improvement of the instruction of science, technology, engineering, and mathematics is clearly at the forefront of public interest. In response, higher education has developed a range of outreach programs, many of which are part of undergraduate education academic curricula that focus on the improvement of learning opportunities for K-12 teachers and students. The purpose of this interactive session is to share the pedagogies used by faculty in four different programs to prepare undergraduates for mentoring, tutoring, and teaching responsibilities. Faculty will share a brief overview of their programs, then engage in a guided discussion to elaborate key points about activities, supervision, and assessment of student learning both at the undergraduate and K-12 levels. Information on each program will be made available to session participants. After a summary by the moderator, audience participants will have time to ask questions and share their experiences with field-based courses.

Literature Review

The role of universities to expand services to the general public, especially public K-12 schools, continues to grow (e.g., Project Degree Completion: A Public University Initiative, the Association of Public and Land-Grant Universities, 2012). In addition, the National Science Foundation, for the past two decades, has required a dissemination component in funded programs (i.e., “greater impacts”) to ensure that funded research is translated for and shared with the general public. The universities have responded with scores of service learning projects, especially in the areas of science, technology, engineering, and mathematics (e.g., Kronick, Cunningham, & Gourley, 2011; Nejme, 2012). However, the design of service learning, like the design of all learning experiences, requires that the needs of the learners are essential considerations in the planning, instruction, and evaluation of student learning (Richey, Klein, & Tracey, 2011).

In the case of outreach programs, often called service-learning programs, the work is directed at the improvement of K-12 student learning. As such, there must be a “multi-leveled” approach to the design of instruction with attention to the articulation of learner outcomes at two levels (i.e., undergraduates and K-12 learners). Correspondingly, there must be multi-leveled approach to identification of appropriate instructional and assessment strategies. Theoretically, because these learning environments are, by design, part of the undergraduate students’ classroom experience, a socio-cultural perspective on the creation of a community of learners (Wenger, 1998) is warranted. All participants are teachers and learners as they engage in program activities in a co-constructed learning environment. College instructors are responsible for the design and implementation of quality learning experiences for undergraduates, and undergraduates are responsible for implementation of quality learning experiences for children. And, the children are expected to learn, while teaching both undergraduates and instructors more about the respective disciplines and how one learns.

Objectives

As a result of this session, participants should learn:

1. The range of theoretical perspectives various programs have embraced to frame the programs of study for their undergraduate student course experiences.
2. The range of instructional and assessment strategies used to align with the theoretical and disciplinary frameworks.
3. The ways that the undergraduate course goals and objectives frame the work that the college students employ in K-12 settings.

4. The ways that the instructors prepare the college students to work with K-12 learners in terms of instructions, management, and assessment.
5. The relative success that the K-12 learners have had given the various stated service-learning program objectives.
6. The challenges and successes inherent in these types of service-learning activities.

Description of Practices

The four program foci are different, consequently the descriptions of their practices will vary. The programs are:

1. Creative technologies
2. FIRST Robotics
3. Physics Outreach
4. Science Outreach Program in Biological Sciences

The descriptions of the practices across the four programs will be shared by the panelists with specific attention to the objectives both for the undergraduates and the K-12 learners, the pedagogical strategies employed at both levels, the outcomes of their program activities, and lessons learned for program improvement. Additional questions will focus on the panelists' observations on the impact on learning of the undergraduate students that extend beyond the stated objectives, and, if known, learning that endures as the students pursue careers and their adult lives. Panelists will also be asked to discuss the impact, if known, on the long-term learning and career choices of the K-12 students who participate in the different programs.

Additional questions will be solicited from the audience throughout the session. Panelists will bring information on their programs to the session that will be made available to session participants. Participants are also encouraged to bring handouts of their similar-type programs to share.

Discussion

University outreach programs for the improvement of K-12 education have advanced significantly over the past two decades. Given the high-stakes accountability student learning at the K-12 level, any programming over and above the standard curricular offerings must be value-added for children. Higher education has responded and improved the design of their programs with the focus on learning outcomes for both the undergraduates and K-12 students. This multi-leveled design endeavor requires that the college instructors and undergraduates think deeply about their pedagogies and student learning. Ultimately, everyone is a member of the learning community and everyone's learning must be promoted. The STEM-related programs showcased in this session illustrate these notions in different ways and across different contexts. As undergraduate programs endeavor to connect with the "real-world," instructors need to become facile with designing on multiple levels in collaboration with students who are at all levels. We truly all become teachers and learners in this type of community of practice.

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From Pedagogy to Andragogy: Best Practices for an Engaged Learner

Melissa Maybury Lubin, *Outreach and International Affairs, Virginia Tech*

Abstract: From adolescence through adulthood, the way in which we learn shifts as the context in which we live changes. Andragogy “...the art and science of helping adults learn” (Knowles, 1990, p. 54) is a model for adult learning. Andragogy is not the antithesis of pedagogy, but rather a flexible, enhanced, inclusive mode of learning that promotes a positive environment for learning for both children and adults. Coming of age is a relative experience and traditional college-aged students present a range of maturity levels. In addition, college campuses are attracting a broader range of age demographics as they continue to diversify their program offerings and delivery modalities. Is higher education adapting their teaching philosophies to have greater impact on adult learners? How can the principles of andragogy inform the practice of teaching in the college classroom? This interactive session will present Malcolm Knowles’ interpretation of the principles of adult learning and invite participants to weigh in on the application and effectiveness of this theory in higher education.

Literature Review

Knowles (1973) interpretation of andragogy included the following six principles:

1. The need to know
2. The learner’s self-concept
3. The role of experience
4. Readiness to learn
5. Orientation to learning
6. Motivation

Through the first principle, Knowles (1990) stated that adults need to know why they should learn something before they will engage themselves in learning it, emphasizing that “...real or simulated experiences in which the learners discover for themselves the gaps between where they are now and where they want to be” (p. 58) stimulate self-awareness and the need to know. In the self-concept of the learner, Knowles (1973) proposed that as humans mature they become more independent, increasing their interest in self-directed learning: Adults have a self-concept of being responsible for their own decisions, for their own lives. Once they have arrived at that self-concept they develop a deep psychological need to be seen by others and treated by others as being capable of self-direction. They resent and resist situations in which they feel others are imposing their wills on them (p.58). Adds Pratt (1993) added, “...self direction has become a keystone in the arching methodology of andragogy; the needs and experience of the learner take precedence over the expertise of the instructor” (p. 19). According to Brookfield (1993): Adults can be seen realizing their potential in making self-directed, well informed choices from a range of possibilities. One of these choices could be to place themselves, for a time, under the external direction of an expert, a mentor, or a role model—in effect, to surrender their own external sense of self-direction. Provided this choice is freely made on the basis of the fullest information possible, and is not force or coerced, it is entirely consistent to see this as an act of self-directed learning” (p. 8).

In the third assumption, Knowles (1973) examined the role of experience in adult learning. “As an individual matures he accumulates an expanding reservoir of experience that causes him to become an increasingly rich resource for learning, and at the same time provides him with a broadening base to which to relate new learnings” (p. 45). Lindeman (1926) suggested “the resource of highest value in adult education is the learner’s experience” (p. 9). Jarvis (2009) supported this point of view, adding:

Human learning is the combination of processes throughout a lifetime whereby the whole person—body (genetic, physical and biological) and mind (knowledge, skills, attitudes, values, emotions, beliefs and sense)—experiences social situations, the perceived content of which is then transformed cognitively, emotively or practically (or through any combination) and integrated into the individual person’s biography resulting in a continually changing (or more experienced) person (p. 25).

As Brookfield (1993) summarized, “Honoring adults’ experiences by making them the focus of serious study is a value proclaimed by most adult educators” (p. 8).

In the next principle, Knowles (1973) added stated that when “...an individual matures, his readiness to learn is decreasingly the product of his biological development and academic pressure and is increasingly the product of the developmental tasks required for the performance of his evolving social roles” (p. 46). Adults are driven to learn new skills or understand new concepts based on the ever-changing demands of work and life, so timing the learning to correspond with the tasks at hand is at the heart of this principle of adult learning. Knowles (1973) presented the orientation to learning as an assumption in “...that children have been conditioned to have a subject-centered orientation to most learning, whereas adults tend to have a problem-centered orientation to learning” (p. 47). Lindeman (1926) suggested that as educators “The aim should be, not to teach adult students that, e.g., a subject called economics exists and needs to be studied but rather that there are economic factors in his total situations and that he must somehow come to know how to deal with these” (p. 74). As Knowles pointed out, “Adults are motivated to devote energy to learn something to the extent that they perceive that it will help them perform tasks or deal with problems that they confront in their life situations” (Knowles, 1990, p. 61).

In the sixth assumption, Knowles (1990) stated, “While adults are responsive to some external motivators (better jobs, promotions, higher salaries and the like), the most potent motivators are internal pressures (the desire for increased job satisfaction, self esteem, quality of life, and the like)” (p. 63). Knowles also felt that a key element in facilitating self-directed learning was for the teacher to create a positive climate conducive to self-discovery. According to Knowles (1975, p. 10), “I see my role to be that of a guide for, and facilitator of, your inquiry, as well as being a source of information about facts, ideas, and other forms of help.”

Objectives

The objectives of this session:

To review the background of andragogy

To learn the facilitator’s personal and professional experience with andragogy

To understand the principles of andragogy

To discuss best practices for applying andragogy in the classroom

Facilitation Method

After reviewing the background and principles of andragogy with the large group, we will break up into small groups to facilitate tabletop discussions for ways to incorporate adult learning principles in the classroom. Best practices will be shared from the small groups to the large group to summarize the discussion.

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Flipping Higher Education: Using Video Prep Lessons to Change the Classroom Learning Experience

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Abstract: Recent studies have suggested students need to be actively engaged to assist in the learning process. However many educators are concerned about how to cover a wide curriculum while incorporating engaging activities. This practice session will focus on one method used to address this challenge: the flipped classroom. In a flipped classroom, teachers create brief video lessons students watch prior to class. The material from each lesson is then applied in class through practice and various collaborative activities. During this session, participants will learn the foundations of the flipped classroom, participate in creating a brief video lecture, and discuss methods for actively engaging students in flipped classroom activities.

Literature Review

Within the college classroom, lecturing serves as a predominate instructional method. However, studies have proposed that this may not be the optimal instructional method for helping students learn. Lang and McBeath (1992) suggested that people retain only 5% of a lecture and 30% of demonstrations. In contrast, retention is significantly greater when classroom instruction includes group discussion (50%), individual practice (75%), and opportunities to teach others (90%). At MIT, Dr. Walter Lewin provided well-renowned eccentric demonstrations and lectures, yet attendance rates averaged only 50% and the courses had a failure rate over 10% (Dori & Belcher, 2005). This led to the creation of a learner-centered instructional approach called TEAL (Technology Enhanced Active Learning). TEAL classes provided interactive, inquiry-based classes where students worked with the professor to solve complex real-world problems. During the first three years of the program, student achievement and attendance were significantly greater in TEAL classes than in the corresponding traditional lecture classes. In addition, research has supported this emphasis on increasing learner-centered practices in mathematics instruction. Lawson et al. (2002) found a strong significant positive correlation between professors who used learner-centered practices in teaching an undergraduate mathematics class and student achievement ($r = .92, p < .001$). More importantly for reform in K-12 education, Judson and Sawada (2001) found that teachers who participated in a greater number of classes as an undergraduate in which the professors used learner-centered practices were significantly more likely to use learner-centered practices in their teaching of middle and high school mathematics.

Flipping the classroom provides an opportunity to integrate learner-centered practices while still providing an outlet for educators to guarantee all material is obtained by students. In a flipped classroom, teachers create video lessons that students watch outside of the classroom. Inside the classroom, teachers are able to help students practice and apply the knowledge from the videos in engaging and meaningful ways such as experiments and projects. Yoon and Sneedon (2011) found that availability of video lectures in mathematics college courses provided significant increases in final grades. At the K-12 level, Clintondale High School in Detroit, Michigan significantly decreased their failure rate and number of discipline referrals after teachers shifted their classroom instruction to the flipped method (Roscorla, 2011). Potential reasons for success when teaching using the flipped classroom method include: transparency of material and in-class opportunities for students and teachers to build meaningful relationships (Goddard, Tschannen-Moran, & Hoy, 2001); removal of classroom distractors since videos are watched individually (Rosengrant et al., 2011); and the access and availability of the lecture videos when they are most needed (Yoon & Sneedon, 2011).

Goals and Objectives for the Practice Session

The purpose of this session is to examine and experience a flipped classroom. Participants will learn about the origins, reasoning, advantages, and challenges of creating a flipped classroom. Participants will explore the components of a flipped Introductory Statistics course and consider how these components could be transferred to other courses. Participants will also learn two methods for creating, uploading, and sharing online video prep lessons. Finally, participants will discuss methods for creating engaging and collaborative activities within the classroom setting.

Description of the Practice to be Modeled

First, this session will be created on a Google Site. This will allow participants to access and review all materials before, during, and after the session. To begin, participants will watch a brief video lesson on the history, success, and setup of a flipped classroom. This video lesson will employ the same techniques I use for my classroom video prep lessons. Next, participants will examine online the structure of a successful flipped Introductory Statistics course that I taught. Discussion will include how the course was created, how videos were shared, the types of activities that occurred in place of lectures, and the preparation time need for creation. I will also share end-of-course survey results about students' attitudes and beliefs of both the flipped classroom experience and mathematics. Finally, participants will create as a group two video prep lessons. The participants will upload and share the videos to the session's Google Site so that they can experience the entire process of the video lesson creation.

Discussion

As an educator, I recognize the difficulty that many students have in being successful in the mathematics classroom. Too often I sent students home to figure out problems only to have them return frustrated and still not comprehending the concepts. The flipped classroom changed that pattern. Now my students are asking questions, engaging other students in class, and completing activities that I never had time to even consider prior to flipping my classes. While students still struggle with mathematical concepts, they now have an opportunity to get the help they need while they are in class. For this reason, I have seen an increase in student achievement and confidence in their mathematics skills by the end of each semester. With the success I have had flipping my classes, I feel it is important to share the flipped classroom model with other professors in hopes that it may provide the opportunity needed to spark change in their classrooms as well.

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There's More to Teaching than the Content: The Need for Study Skills Lessons

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Abstract: While a major goal in any course is to teach the content of that topic, whether math or English or psychology, that is often not enough. Since student success and retention are key issues for all colleges right now, it is important for students to have the skills to succeed in college. From non-traditional students to students fresh out of high school, many of them come to college with limited studying and test-taking skills. According to Martino and Hoffman (2002), "The number of college students experiencing difficulty with reading comprehension and study strategies is surprisingly high" (p. 310). This lack of skills can be the difference between someone staying in college or getting discouraged and dropping out. The goal of this presentation is to review some of the factors that get in the way of student success in the classroom, to review some concrete suggestions for teaching study skills that can be adapted to fit the needs of individual classes and assignments, and to offer an opportunity for the sharing of additional suggestion for teaching study skills and how to apply the skills from the presentation. The suggestions to be shared are based upon 10 years of working with students in university, small college, and community college settings.

Literature Review

Beliefs about test anxiety and learning styles can prevent students from believing in themselves and being open to other means of studying. However research shows that a little anxiety actually helps and that the biggest anxiety comes from lack of preparedness (Kirkland & Hollandsworth, 1980). The problem isn't feeling anxiety, but how we deal with that anxiety (Cohen, Ben-Zur, & Rosenfeld, 2008). Studies have shown that some people, especially females with higher test anxiety can actually perform better than students with lower test anxiety (Chapell et al., 2005). When it comes to research on learning styles Pashler, McDaniel, Rohrer, and Bjork (2008) found "very few studies have even used an experimental methodology capable of testing the validity of learning styles applied to education" (p. 105). Halbert, Kriebel, Cuzzolino, Coughlin, and Fresa-Dillon (2011) found that students' perceptions of learning styles affected the likelihood of using certain available resources but the use of those resources had no impact on student grades while Bollinge and Supanakorn (2011) found that learning styles do not affect student perceptions of usefulness of materials outside of the student's supposed learning style (i.e. visual resources were rated as useful regardless of learning style).

Students need to have a good understanding of what they are trying to get out of the reading. Is their goal to learn the material or get through the reading or merely learn the key terms? Their answer affects what the student gets out of the course materials. According to McCrudden and Shraw (2010) "students with different goals who read the same text might focus on and learn different information" (p.97). Students also tend to believe that time spent studying is a reliable measure to likely success on a test however as Dewey (1997) points out it is not how long you study but how effectively you study. To effectively study students need to believe that they can do well (Prat-Sala & Redford, 2010), they need to appropriately use specific study skills (Nonis & Hudson, 2010) such as note-taking and flash cards (Kornell & Bjork, 2008; Kornell, & Son, 2009), and need to develop test-taking skills that help them focus on finding the correct answers and not merely the most familiar answers (Kirkland & Hollandsworth, 1980).

Goals and Objectives

The goals of this session are to educate participants on research about anxiety and learning styles, explore the pattern of learning especially in terms of memory and reading skills, share concrete test-taking skills that are tailored to measurement type, and discuss the resources that are available for students. This will be followed by time for participants to share of ways to apply these methods in their own teaching and opportunities for additional suggestions, research, and resources to be discussed.

Description of Practice

This project began with asking students who did not do well on the first test in a course to meet with me to discuss their approach to studying. What came out of these sessions was a list of misconceptions, errors, and bad practices

that were common among students doing poorly. I started reviewing the research and developing specific suggestions that were tailored to each of these common issues I heard about during these discussions. For instance, many students wrote off their own control over the situation by saying they had test-anxiety and therefore could never do well. While anxiety during test-taking is common, a little anxiety can actually help performance and being prepared can reduce anxiety to a manageable level. Other issues included students using flashcards in ways that encouraged recognition and rote memorization rather than comprehension and application, students not utilizing available study aids and resources, and students mistaking familiarity for understanding. The end result was a series of suggestions that I could tailor to student needs and the creation of handouts and materials that made students aware of these common errors. These suggestions, materials, and resources will be shared with the participants in order to generate a conversation on the application of these resources and suggestions for additional resources.

Discussion

This presentation is the culmination of almost 10 years of working with students on a one-on-one basis, exploring how they study, and making focused suggestions for improvements in studying. This work is also based in sound research on memory, learning styles, and anxiety. The end result is a series of “if-then” suggestions based upon student needs and course structure. The point is not to go through all of these suggestions with all students but to choose the skill set that would be most beneficial for that particular student in that class, though the hope is the skills apply in future classes or work environments. On average students who utilize the suggestions targeted for them in one-on-one discussions raise their grades 10-15%. The hope is that through this session participants will see how some of these suggestions can be implemented in their own courses and to bring up additional suggestions culled from the combined experiences of the audience members.

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Using Visual Imagery to Improve Performance and Enhance Flow: Is the Effort Worth the Reward?

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Abstract: For this investigation, we used an experimental design to examine how a visual imagery intervention and two levels of challenge would affect the flow experiences and performance of cadets engaged in Army ROTC marksmanship training. We employed MANCOVA analyses, with prior marksmanship training experience as a covariate, to assess cadets' (n = 127) marksmanship performance and flow experiences. Findings revealed that the use of visual imagery did not positively enhance flow and improve performance with statistical certainty. The results, however, might be practically significant because they showed that when cadets were faced with a more challenging situation and had engaged in visual imagery exercises, they were more likely to outperform cadets in the same challenge condition who had not engaged in visual imagery exercises. On average, cadets in the high challenge condition who engaged in visual imagery exercises outperformed non-visual imagery cadets in the same condition by over one point on a six-point scale. Additional findings revealed that level of challenge did not affect flow experiences, which is counter to the postulates of flow theory. Level of challenge did, however, negatively impact performance. That is, when cadets were faced with a more challenging situation, they performed more poorly. Prior experience (skill level) was discovered to better facilitate flow experiences, as opposed to a balance of challenge and skills. Higher levels of prior marksmanship training experience were associated with cadets' potential to enter the flow state. Implications for future research investigating how challenge and visual imagery affect flow experiences and performance in the context of Army ROTC marksmanship training are discussed.

Army Reserve Officers' Training Corps (ROTC) is a college elective that is geared toward training future military officers for active duty or Reserve Forces. There are six Senior Military Colleges that offer ROTC training in the United States, two of which are at predominantly civilian universities. Army ROTC has a total of 273 programs located at colleges and universities in the U.S., the District of Columbia, and Puerto Rico, with an enrollment of more than 35,000 men and women (U.S. Army Cadet Command, 2012). Nearly 60 percent of the second lieutenants who join the active Army, the Army National Guard and the U.S. Army Reserve participated in Army ROTC.

One component of Army ROTC instruction that cuts across each year of instruction is marksmanship training. At some institutions, this training involves engagement skills trainer (EST 2000) simulations. EST simulation training is conducted with a rifle (e.g., 16-A2) converted for simulation training (e.g., laser mounts and air compression to simulate actual firing). Cadets fire at a theater-style screen with targets placed in five lanes, allowing five marksmen to engage simultaneously.

Generally, cadets receive pre-marksmanship instruction and then engage in a "grouping" exercise on the simulator, which allows them to eventually undergo various target training exercises. In order to meet the standard for "grouping," the cadet must place five of six shots inside a four centimeter circle, regardless of where on the target they aim. They are allowed 18 shots total to meet "standard". More skillful shooters typically group in fewer shots than less skillful shooters. Often, a large portion of cadets fail to group in the allotted 18 shots. This leads to more time-consuming training and subsequent retraining of cadets just to get them started on the simulation training exercises that are most desired and valued.

It is this problem that led to the present investigation. Specifically, we wanted to know if getting cadets in "in the zone" (i.e., flow) would improve performance and streamline marksmanship instruction. The literature suggests that the explicit and intentional use of visual imagery can enhance motivation and improve performance (Calmels, Berthoumieux, & d'Arripe-Longueville, 2003; Martin & Hall, 1995; Vealey, 2007). Using this theoretical genre, we decided to implement a visual imagery intervention to determine its effects on cadets' flow experiences and performance. Such an investigation, we believed, would help determine if this form of pedagogy would be useful to ROTC marksmanship instructors.

Methodology

We created experimental conditions using a 2 X 2 factorial design with visual imagery group (yes or no) and challenge condition (low or high) as between-subject variables, with gender and prior experience as covariates. Flow and performance served as dependent variables. Participants were randomly assigned individually to either a visual imagery (n = 70) or no visual imagery (n = 77) group and either low challenge or high challenge conditions. For the visual imagery component, cadets were asked to access an mp3 audio file on a website and listen to that audio session every day for 15 days. On the 16th day, the data gathering process began. To gather the data, cadets were asked to engage in a “grouping” exercise on the EST 2000. Immediately following the “grouping” exercise, both with and without visual imagery, cadets were administered the Flow State Scale-2 (Jackson & Eklund, 2004). Performance was tallied and entered on each corresponding questionnaire form.

Analysis

We conducted a two-way multivariate analysis of covariance (MANCOVA) with visual imagery (yes vs. no) and challenge level (low vs. high) to determine the effects of the intervention. Prior experience served as a covariate in all of the analyses. We performed multivariate *F*-tests using Pillai’s trace as the criterion first on a related set of dependent variables (i.e., flow and performance). That is, we conducted multivariate *F*-tests to determine whether the independent variables influenced the dependent variables. Univariate ANCOVAs were performed as follow-up tests to the MANCOVAs as needed.

Results and Discussion

In short, the findings from this investigation demonstrate that the use of visual imagery is a useful pedagogical tool for ROTC marksmanship instructors who want to improve performance and enhance flow experiences. Although findings revealed that the use of visual imagery did not positively enhance flow and improve performance with statistical certainty, we think the findings demonstrate practical significance. Specifically, results showed that when cadets were faced with a more challenging situation and had engaged in visual imagery exercises, they were more likely to outperform cadets in the same challenge condition who had not engaged in visual imagery exercises. On average, cadets in the high challenge condition who engaged in visual imagery exercises outperformed non-visual imagery cadets in the same condition by over one point on a six-point scale.

Notably, some of the tenets of flow theory were not supported in this investigation. Specifically, gradations in challenge level failed to impact flow experiences. Prior EST experience-and by extension skill level- however, positively impacted flow experiences and performance. The more experienced the cadets were with EST 2000 simulation training, the greater their potential to achieve flow-like states and perform at a higher level than those cadets with less experience. Additionally, results showed that all cadets performed better in the low challenge condition than in the high challenge condition. Cadets who engaged in visual imagery training, notably, outperformed those who did not, especially when faced with greater challenges.

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Personality Pad: Online Multisource Feedback for STEM Students Enhances Academic Performance

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Abstract: With support from National Science Foundation grant EEC #1158728, the present study used a newly developed online delivery system to provide personalized multisource feedback to a sample of 206 undergraduate STEM students. PersonalityPad.org is an automated multisource feedback platform that allows users to generate personalized multisource feedback. This process incorporates prevalent 360-degree feedback strategies and “best practices” for effective feedback administration. The combination of self-generated feedback and feedback from known others appears to facilitate processes related to self-insight and developmental goal setting. Those who received conscientiousness feedback from multiple sources participated more in class and submitted higher quality homework assignments afterward, leading to significantly higher final course grades compared to a control group in the same class. A structural analysis indicated that goal-directedness plays a critical intermediary role between receiving personalized feedback and achieving subsequent self-development goals. Implications are discussed from academic and social perspectives.

Literature Review

As STEM educators, motivating students to engage course material and perform to their potential is among our most urgent challenges. Professional organizations commonly seek to motivate employees by providing performance feedback from a diverse group of raters that may include supervisors, peers, subordinates, clients, and others. According to some sources, at least 90% of Fortune 1000 companies currently use multisource (i.e. 360-degree) feedback techniques to facilitate professional development (e.g. Edwards & Ewen, 1996). Vazire and Carlson (2010) recently reviewed evidence on self-knowledge of personality, finding that individuals do have a general understanding of how they behave and how others perceive them, but this knowledge is limited and prone to misperception. Combining ratings from multiple perspectives can significantly increase the validity of personality assessment. In academic contexts, relatively minimal, student-focused interventions have been shown to significantly improve academic performance under numerous experimental conditions (Wilson, 2011; Yeager & Walton, 2011). Conscientiousness has been shown to positively predict numerous adaptive outcomes at work, including salary, number of promotions, occupational status, and job satisfaction (Judge, Higgins, Thoresen, & Barrick, 1999; Judge & Kammeyer-Mueller, 2007; Sutin, Costa, Miech, & Eaton, 2009).

Methodology, Data Analysis, and Results

At PersonalityPad.org, participants register a dedicated WordPress dashboard, which displays feedback generated by the participant and by participant-selected informants, as well as normative information for comparison, interpretation tools, and detailed instructions. The platform integrates multisource feedback tools into a WordPress website using the advanced functionality of Qualtrics, an online survey generation, delivery, and analysis tool. Qualtrics enabled a number of key features including automatic scoring of participants’ surveys, automatic generation of survey panels, and management of email distribution of the surveys. Qualtrics also kept track of participation rates, actual time participants spent on the surveys, and other metadata useful to both the pedagogy and the research being conducted.

Conscientiousness is one of the “Big Five” personality traits. A longitudinal experiment within an interventional framework evaluated the hypothesis that *multisource conscientiousness feedback* would provoke goal-directedness and motivate adaptive action in university students. Compared to those who received self-generated feedback or no feedback, those who received conscientiousness feedback from multiple sources - including friends, parents, peers, and teachers - participated more in class and submitted higher quality homework assignments afterward, leading to significantly higher final course grades ($M = 83.90$) compared to a randomly-assigned control group in the same class ($M = 78.79$). A structural analysis of relationships among key variables indicates that post-intervention goal-directedness plays a critical intermediary role between receiving personalized feedback and achieving subsequent self-development goals.

Discussion / Conclusion

Bollich, Johannet, and Vazire (2011) recently published a unique hypothesis, that explicit personality feedback from close others could serve as a valuable self-development tool. Smither, London, and Reilly (2005) published a theoretical model of improvement following multisource feedback. The current study provided some evidence for both these propositions; for instance, final course grades were significantly higher in the 360-degree feedback condition than in the control condition. One uniquely promising aspect of feedback as a route to self-knowledge is that, unlike the intrapersonal routes to self-knowledge, feedback actually gives the person new information to consider. If a person is confronted with repeated feedback from trusted sources, and if the recipient is appropriately prepared for the information, knowledge and motivation may be gained that would not have been possible through self-guided efforts. Another essential element of self-development is the formation of an intentional developmental relationship with one's self. One must practice self-control through benevolent self-governance stemming from a meta-cognitive awareness of one's multiple identities, inner voices, social dynamics, and competing priorities.

PersonalityPad.org combines open-source software with commercial web services to support an adaptable platform that can be used to assess personality, behavior, or performance in many personal, academic, and professional contexts. The current study provides evidence that such methodologies represent promising strategies for enhancing self-awareness, -assessment, and -development. Generally speaking, understanding and improving one's self may be facilitated by personalized feedback from multiple external sources paired with opportunities to set and pursue personal goals.

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Thursday

February 7, 2013

Session 8

11:20-12:10 PM

Presentations:

Creating Classroom Community with Reflective Blogs
Bach, D., Alexander, J., and Alexander, J.

*The Pecha Kucha 20x20 as Assessment: Creation, Selection,
Explanation, Synthesis and Delivery*
Dredger, K., Kajder, S., and Beach, C.

Strategies for Developing Future Faculty: A Blended Course on Teaching with Technology
Clouser, S., and Clouser, S.

Engaging the Adult Learner: Six Active Learning Strategies for the Higher Education Classroom
Miller, S., and Maynard, K.

Flipping the Classroom: Creating Online Modules to Enhance Student Learning
Barber, J.

*“Loneliness Seeking Communion”: Narrative “Pedagogies of Suffering”
in Undergraduate Interprofessional Education*
Osmond, C., Cumbie, S., and Miller, W.

Flipping: The Comfortability and Workable Aspects in Higher Education
Gaikwad, P.

The Blended Education Collaborative: Building Innovative Pathways to Learning
Bogner, L., and Dodd, B.

<http://www.cider.vt.edu/conference/>

Creating Classroom Community with Reflective Blogs

John Alexander, *Sciences, Humanities, Arts Network of Technological Initiatives*
Dorothe Bach, *Teaching Resource Center/German Department, University of Virginia*

Abstract: This interactive practice session offers faculty a chance to explore the role of technology in enhancing and accelerating community formation in a class setting. Drawing on their rich experience with using extensive blogging as a complement to in-class discussion, the presenters will discuss the nuts and bolts of creating assignments that foster community while engaging students individually in a deep and intentional exploration with the material. Participants will then consider their own teaching and work together on drafting a plan for invigorating their courses. This session will particularly appeal to faculty teaching discussion-based courses and educational developers interested in supporting them.

Literature Review

Research consistently highlights the importance of the affective domain for learning, including the benefits of creating strong classroom communities and making the material personally relevant (e.g. Block, Fink, Svinicki.) The literature is also very clear on the benefits of learning through writing and the importance of continuous engagement with a subject to ensure lasting learning (e.g. Ambrose, et al.; Bean.) Given students' proclivity to engage social media as vehicle for building community and for expressing in writing what's relevant to them, how can educators leverage these media's potential for enhancing learning?

Goal and Rationale

The goal of this session is to offer a rich case and the technological tools for using social media to positively affect student motivation and learning. The case describes a series of classroom experiments in which a team of humanities teachers with appointments in faculty development and instructional technology explored the effectiveness of blogging assignments. Analyzing student work as well as responses to a specifically tailored survey, they found that well-designed use of social media can accelerate the process of community building by extending quality peer engagement in a diverse group beyond the classroom. The extensive use of blogs also encouraged meaningful and continuous engagement with course material outside of class. In addition, students found that blogging was an effective tool for reflection and self-discovery and that individual self-discovery was reinforced by the social dimension of blogging.

The blogging, then, served as a vital component in developing students' comfort and skill writing and the session has much to add for teachers grappling with the problems of teaching writing in the 21st Century. As blogs are emerging as an influential genre—a genre that moves people and that leverages proclivities of contemporary students—teaching writing today can legitimately explore the fact that blogging is both personal and at the same time carries an immediate sense of audience. Another fertile aspect of blogging is that it is typically geared towards a more general readership, which for many students will offer a valuable complement to more specialist or scientific writing.

Practice Session Outline

The session begins with an icebreaker that invites participants to share experiences with social media in college classrooms. What worked? What didn't? Why? The presenters will then describe the design of their co-taught 300 level writing intensive class, especially the use of extensive blogging. Drawing on their rich expertise in instructional development, presenters will provide (a) a sound pedagogical rationale for their approach (b) accessible technical details via handouts and Q & A, and (c) evidence for the intervention's impact on learning. Participants will then engage in a discussion about the nuts and bolts of creating assignments that work and reflect on how they can support faculty in exploiting the potential of social media for learning.

Objectives

Participants will leave the session with

- enhanced appreciation for the importance of the affective domain for learning
- enthusiasm for encouraging faculty to explore social media for learning
- sound pedagogical and technological knowledge base for setting up blogging assignments that work
- renewed passion for helping faculty design courses grounded in the literature on learning

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The Pecha Kucha 20x20 as Assessment: Creation, Selection, Explanation, Synthesis and Delivery

Katie Dredger, *Virginia Tech*
 Sara Kajder, *University of Pittsburgh*
 Crystal Beach, *University of Georgia*

Abstract: The Pecha Kucha presentation is a multi-media format wherein students create and organize twenty visual images for 20 seconds each to share their ideas. Also called Lightning or Ignite Talks, these presentations take 6 minutes, 40 seconds to share and can be used to meet multiple classroom objectives. Like an “elevator speech,” or “TED Talk,” the Pecha Kucha 20x20 (<http://www.pecha-kucha.org/>) presentation format was developed to force professionals to think critically about information that they present without digressions and with effectiveness, economy and clarity. Presenters will facilitate collaboration around ways that students can create these presentations to hone their understanding and to share conceptual understandings. In creation or selection of visual images, students must use higher order thinking skills. They must then explain their conceptual understandings with the use of these images and accompanying dialogue. Students must share these images coherently, and must, in a rapid and rehearsed way, present these conceptual understandings to an authentic audience of their peers or professionals in the field. Because these presentations in business have morphed into places to meet, greet, and learn from others in professional fields, the Pecha Kucha is also a social network for students and new professionals. When used as assessment, students share their learning in an innovative way with an audience of their peers. Instructors can see how students synthesize course information in ways that are meaningful, if perhaps different, for each student.

Literature Review

Pecha Kuchas (translated from “chit-chat” in Japanese) began in Tokyo in 2003 by young professionals wanting to network and share their knowledge with others. A precursor to TED Talks, the Pecha Kucha presentation is structured around twenty slide images that each automatically advance after twenty seconds. The presenter uses the images as visual stimuli that enhance or explain a concept. The tight format does not allow for digression from the topic being presented. Because slide shows in the university classroom have become “synonymous with mind-numbing boredom, painful expository bullet points, and the overexposure of . . . clip art” (Gries & Brooke, p. 1) the Pecha Kucha format requires that presenters choose thoughtful images and stay on topic in a prescribed and confined period of time. Pairing highly effective visuals with a lecture promotes conceptual understanding and recall of ideas (Fisher, Brozo, Frey, and Ivey, 2011; Marzano, R.J., Pickering, and Pollock, J.E., 2004; Reynolds, 2008). Marzano, et. al. (2004) cites the power of non-linguistic representations that help learners make sense of difficult concepts. Adjunct displays (Fisher, Brozo, Frey, & Ivey, 2011) can be comprised of photographs, maps, graphic organizers, outlines, or diagrams and offer pictorial, graphic, or spatial representation presented alongside of text. Hence, it is not the idea of visuals or slide shows that have given traditional Powerpoint presentations a bad reputation. Instead, it may be in the delivery (Hardin, 2007). The Pecha Kucha presentation is a multi-media format wherein students create and organize twenty visual images for 20 seconds each to share their ideas. Also called Lightning or Ignite Talks, these presentations take less than seven minutes to share and can be used to meet multiple classroom objectives. Like an “elevator speech,” the Pecha Kucha 20x20 (<http://www.pecha-kucha.org/>) presentation format was developed to force professionals to think critically about information that they present with effectiveness, economy and clarity.

Goals and Objectives

After watching an exemplar of a Pecha Kucha 20x20 Talk, participants will watch a prepared presentation on the use of the Pecha Kucha as classroom assessment. They will then be given an opportunity to collaborate in small groups as to topics and concepts that could be assessed in university classrooms with Pecha Kucha Talks. Participants of this practice session will understand the limitations and possibilities of such presentations.

Description

What is interesting about this exercise is that it can be used as an assessment after a unit, semester, or year of study within or across courses or programs. Attendees will consider the benefits of encouraging students to search for images that are available freely without copyright violation or requiring that students create original adjunct displays, images, or photographs in their talks. Attendees will have a chance to ask questions about copyright and free-use guidelines, and will also talk about the advantages of students creating pictures and taking photographs that serve to symbolically enhance what they are trying to share verbally. This session will appeal to all levels of technology users, as the end of the session will involve differentiated groupings so that presenters can support educators in considering how these talks can transfer to the university classroom. Samples of assignment sheets and possible rubrics will be shared.

Discussion

One of the many benefits of the Pecha Kucha talk is the social nature of students presenting to their peers and being assessed in such a public way. “Students begin to take their own as well as their peers’ ideas more seriously” (Gries and Brooke, p. 25). Because Pecha Kucha Nights are networking opportunities, professionals find these social networks enlightening and fun. Still, there are some negatives of such a presentation. The topic or concept must fit the confines of the presentation; there is no room for changes-on-the-fly as may be needed based on informal classroom assessments that may be as small as students’ quizzical expressions; and “nuanced explanation of many complex concepts” may not work for this kind of talk (Klentzin, Paladino, Johnston, Devine, 2010). Discussions of fair use of images obtained online must be clarified and creative commons licencing may not be enough to serve the purposes of the talk. Another disadvantage may be the aspect of presentation and public speaking that this entails. Some students have conceptual understandings of issues of their course, but not the comfort level needed for presentations such as these. Still, the presenters will suggest that all university graduates will have enhanced learning by having such an experience, as most professionals today may be asked to present information in a concise and effective way. The time and thought that the slide preparation requires for these presentations can be an extensive thought exercise that hones presenters’ beliefs. Effective presentation is the “interdependence of innovative ideas, effective delivery and visual design” (Duarte, 11) and the Pecha Kucha 20x20 is an excellent way for students to share their learning in the university classroom.

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Strategies for Developing Future Faculty: A Blended Course on Teaching with Technology

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Abstract: At the University of Georgia, the Interdisciplinary Teaching Certificate program includes a number of activities that encourage graduate students to focus on their teaching practice. One activity is a semester-long seminar on teaching with technology. The course structure is provided by the instructor, and the topics are selected by the students. The instructor and students research both ubiquitous and emerging technologies. These are explored through a combination of instructor-led and student-led presentations, as well as development of a class wiki that includes technical and pedagogical details related to the tools. Students reflect on the use of instructional technology in their own disciplines via blogs. Class members also participate in a four-week online component in which they learn about teaching and learning online. In this practice session, the course instructor will share the strategies used in the course and encourage discussion among session attendees.

Session Goals

The purpose of this session is to describe the strategies used in the graduate course *Teaching with Technology in the College Classroom*. Participants in the session will have the opportunity to discuss the following:

- Using the Teaching Perspectives Inventory to examine students' motivations for and ideas about teaching
- Building a course schedule collaboratively with students
- Encouraging critical reflection in blogging
- Promoting class collaboration with wikis
- Exploring online teaching and learning via an online module

Literature Review

College undergraduates today are connected, and they expect to use technology in their classes (Howe and Strauss, 2003; Smith, Rainie, & Zickuhr, 2011). As many undergraduate classes are taught by graduate student teaching assistants (TAs), universities often provide support for TAs and provide professional development activities for those who plan to pursue careers as teaching faculty (Mintz, 1998). According to Albright (1998), guidance about teaching with technology is an important component of TA professional development.

Teaching can be complex, uncertain, and problematic (Brookfield, 1990). When teachers identify their actions, intentions, and beliefs regarding teaching, they can reflect on these in times of uncertainty (Pratt, 1998). The Teaching Perspectives Inventory is an instrument for teachers to identify what is important in their practice and provides a foundation for reflection as well. While reflection can be very personal, faculty in myriad disciplines are encouraging students to use blogs to make reflective writing public and collaborative (Yang, 2009). Wikis offer another vehicle for collaboration and have a number of implications for teaching and learning (EDUCAUSE Learning Initiative, 2005).

Description of Practice

At the University of Georgia, the Interdisciplinary Teaching Certificate program includes a number of activities that encourage graduate students to focus on their teaching practice. Students in the program must teach at least four course sections, complete nine hours of course work, develop a teaching project, demonstrate scholarship of teaching and learning, and submit a teaching portfolio. For the course work component, students typically take an introduction to college teaching, an advanced pedagogy or course design course, and a course on teaching with technology. *Teaching with Technology in the College Classroom* is an examination of instructional technology in the college classroom, on campus and online. The purpose of the course is to encourage participants to critically reflect on the use of instructional technologies in their fields and provide them with opportunities to develop skills in employing technology in the classroom. Topics include an overview of current and emerging technologies, how technology may facilitate teaching and learning, incorporating technology into the disciplines, and teaching online.

Teaching with Technology in the College Classroom begins with the Teaching Perspectives Inventory, an opportunity for students to reflect on their motivation and ideas about teaching (Pratt, 1998). Student results on the TPI are then used as a lens through which students view the use of technology in their teaching. The technologies included in the course are brainstormed and selected by the students, then explored through a combination of instructor-led and student-led presentations as well as development of a class wiki. Students reflect on the technologies discussed each week by blogging and responding to classmates' blogs. Four weeks of the course are delivered online to give students an opportunity to experience that environment and develop their own philosophies with regard to online learning.

Discussion Questions

1. What are the benefits and challenges involved in collaboratively building a course schedule with students?
2. What is the role of critical reflection in the development of future faculty? In other disciplines?
3. How do future faculty learn to teach online? How might this apply to current faculty?
4. How can the components of *Teaching with Technology in the College Classroom* be incorporated into other courses?

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Engaging the Adult Learner: Six Active Learning Strategies for the Higher Education Classroom

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Abstract: This presentation will discuss effective methodology for preparing pre-service teachers to be better equipped K12 teachers, where by improving the learning of each child in the 21st Century inclusive setting. Its focus will be on six active learning strategies that professors can implement in a higher education classroom. These strategies include creating visual products and representations that help integrate learning and demonstrate higher levels of understanding (analysis and synthesis) so that the learner can represent their thinking and understanding of the concepts being taught. They allow the student to represent their internal thinking process to others through external representations, thus making the teaching process explicit and helping to model problem solving skills that can be applied to other situations. The use of active learning strategies support learners to make meaning either while reading academic text by giving them tools to filter important information or connect, apply and generalize previous learning to new information being taught. Using active instructional learning strategies, such as graphic organizers, visual representations, activating background knowledge, reflective journaling and authentic role playing helps bring the learners' ideas, concepts and experiences to consciousness so they can connect this understanding to the concepts being taught. It is essential to give students a space where the learner can record and reflect upon their experiences, observations, and feelings that can later be used to elicit class discussion, develop belief systems, and synthesize previous learning.

Literature Review

Although the teacher training college is well established as an integral component of higher education, our dialogue around what constitutes effective methodology for preparing pre-service teachers is continuously re-emerging. Calls abound for structural change in teacher education to better equip K12 teachers to improve the learning of each child in the 21st century inclusive setting (van Laarhoven, Munk, Lynch, Bosma, & Rouse, 2007). We have “pinpointed three major obstacles to teacher learning that teacher education programs must address if our enterprise is to be successful: the complexity of learning to teach, the need to demystify the knowledge we do have about how people learn to teach, and the necessity of conceptualizing learning to teach as an ongoing, enduring process” (Spalding, Klecka, Lin, Wang & Odell, 2011, p. 3). Traditional teacher education has been criticized for not preparing teachers to make the theory-into-practice leap (Darling-Hammond & Baratz-Snowden, 2008). The promotion of learning, in which students are actively involved with the course material and practicing the scholarship of teaching and learning through a pedagogy of interaction (active learning) are ways to address these issues.

Active instructional learning strategies are used by students to help them understand information and solve problems. A learning strategy is a person's approach to learning, synthesizing and using information. Students who do not know or use good learning strategies often learn passively and ultimately fail in school (The University of Kansas Center for Research on Learning, 2003). There are a variety of effective active learning strategies that can be used to make thinking more visible. As teachers of higher education, “...we first must be clear in our own minds what thinking is. This allows us to make thinking visible by naming and noticing it as it occurs.” (Ritchhart et al., 2011, p. 30). Largely due to the fact that thinking is such an internal process, the use of active learning strategies can only enhance our ability to make the learning more visible. For example, graphic organizers can successfully improve learning when there is a substantive instructional context such as explicit instruction incorporating teacher modeling and independent practice with feedback (Boyle & Weishaar, 1997; Gardill & Jitendra, 1999; Idol & Croll, 1987, as cited in Strangman, Hall & Meyer, 2003). Additionally, visual representations allow teachers to see not only what students are learning, but also how they are thinking and how this process evolves over time (Hattie, 1992, as cited in Wexler & Hochman, 1996). Furthermore, preservice teachers benefited from spending class time defining, discussing, and viewing models of active reflection. We must actively teach and model reflective skills in a variety of ways if we are to demystify reflection (Spalding & Wilson, 2002). One of the pedagogical implications is that we need to create learning experiences that allow teachers of higher education and pre-service candidates the ability to name the tacit patterns of instructional decisions and articulate the seemingly invisible framework of an expertly managed learning environment. (Flanagan, Leaman, Maynard, in press).”

Goals and Objectives for the Practice Session

Participants will participate in an interactive presentation where we will describe the six active learning strategies and provide specific instructional examples of each. The six instructional strategies include:

- Use of concept/graphic organizers to interact and make connections to new information.
- Use of visual representations to integrate learning and demonstrate higher levels of understanding.
- Use of learning strategies to draw important information from course reading and foster class discussions.
- Use of activities to activate students' background knowledge and create interest in new concepts.
- Use of reflective journals to create space for personal reactions to learning and synthesizing previous knowledge with new knowledge.
- Use of role-playing to stimulate classroom teaching with the added component of purposeful pausing to reflect upon decisions making in the teaching process.

Description of Practice to be Exemplified

Through this session, presenters will...

- Engage in interactive discussions
- Model key active learning strategies
- Allow participants to practice using key active learning strategies
- Show student exemplars from higher education courses
- Share resources and new ideas

Discussion

Comprehension of new information being taught can be improved through the use of effective active learning strategies. It is essential for teachers of higher education to use, name, and model these effective strategies, hence better preparing future K12 teachers. This presentation will discuss and provide real and authentic higher education classroom examples of how using graphic organizers, visual representations, activating background knowledge, reflective journaling, and authentic role playing will have a positive effect on the teaching and learning of pre-service teachers.

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Flipping the Classroom: Creating Online Modules to Enhance Student Learning

James P. Barber, *School of Education, College of William and Mary*

Abstract: This project utilizes short, online learning modules to invert the traditional instructional sequence and deliver introductory lecture material to students before initial readings and class interactions. This approach has been called “flipping the classroom” to describe the reversal of the traditional lecture-followed-by-homework model. Using Adobe Captivate, the author created a series of online learning modules for a course, introducing core concepts to students before class sessions, and preserving valuable face-to-face time for discussion and activities. With the online introductory modules, students can learn about the more abstract concepts (in this class, theories of personal development) first in a short, asynchronous online module, then next through course texts, and be better prepared to discuss and apply learning during class meetings. Students can view the module as many times as they like before class (and throughout the semester), pause/restart/rewind the presentation if desired, and have great personal control over how they experience the module. A brief self-quiz at the end of each module reinforces the main points.

Literature Review

The traditional classroom paradigm has remained unchanged for generations: students read material independently at home, instructor lectures on same material in the next class period, followed by limited face-to-face time for discussion or active learning, and then students reinforce material (again independently) with homework and assignments. In recent years, instructors have experimented with using technology to offer introductory material to students before class sessions. This approach has been called “flipping the classroom” to describe the inversion of the traditional lecture followed by homework model (Berrett, 2012; Saltman, 2011).

Fueled by the success of online instructional organizations such as the Khan Academy and the proliferation of software available to integrate rich media into learning modules, there has been an increased interest in the benefits of the flipped classroom among college educators. Research on higher education pedagogy supports guiding students through new material in a manner that allows for individual pacing and thoughtful reflection (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010). The online delivery format is well-suited for presenting material in a way that offers a foundation for further learning and scaffolds information to be reinforced in person during class discussions and activities. Studies have also shown students engaged in a flipped classroom environment to be more aware of their learning processes (Frederickson, Reed, & Clifford, 2005; Strayer, 2012). This awareness of learning, also known as metacognition, has also been linked to personal development in students (King & Siddiqui, 2009).

Goals and Objectives for the Practice Session

Participants in this session will learn how to conceptualize online learning modules for use before students engage with course texts, in effect “flipping” the traditional classroom instructional sequence by placing instructor lecture and one-directional information delivery in a format that students can access independently before class meetings. The session will focus on strategies for online module development (selecting topics, organizing material, using varied media) rather than the technology itself (i.e., tutorial on the Adobe Captivate software). Common software used for online module development will be listed, but this program is not intended to be a software demonstration.

The actual online modules created for this course will be available; participants who have a laptop or mobile device can access the materials during the program; the modules will be available as resources to participants even after the conference concludes. In addition, a sample online module on flipping the classroom will be developed specifically for this program to model the practice.

Preliminary Outline for Session (50 minutes)

Introduction to *flipped classroom* concept, presented as a sample online module (7 minutes/7)

Review of literature on teaching, learning and instructional sequencing (8 minutes/15)

Applying instructional sequencing concepts to curriculum development (15 minutes/30)

Interaction/hands-on learning – participants share best practices with flipped instruction (10 minutes/40)

Questions and conclusion (10 minutes/50)

Description of the Practice to be Exemplified

I have used rich media to create short, online learning modules to introduce concepts for my course on *College Student Development Theory* (EDUC 603) in the Higher Education Program at the College of William and Mary. My vision for this project was to have a brief learning module (approximately 10 minutes) to introduce the major theories we study in the semester. I developed eight of these modules for the course, positioned approximately every other week in the semester. The concepts in this course are often abstract (e.g., cognitive development, moral judgment, identity intersections, psychosocial development) and I reasoned that students would benefit from short “mini-lectures” to introduce the key concepts and allow the ideas to sink in before our class meetings. The term “flipped classroom” has been coined to describe the format of introducing topics to students at home via online delivery, and in effect maximizing class time for application exercises (as opposed to the traditional sequence of introducing ideas in a class lecture and applying learning at home through homework assignments).

I utilized this approach previously in a very amateur manner with five-minute voice-over-PowerPoint videos using free screen capture software. I received strong positive feedback from students to the model, and improved on the idea with professional tools and technical assistance. With more advanced software, and the equipment in our School of Education’s Technology Integration Center and the Swem Library Media Center, I have been able to incorporate new elements such as short videos and interview sound bites from theorists we are reading. I have also developed short self-quizzes at the conclusion of each module to reinforce key points. At the conclusion of each module, students are invited to complete a brief evaluation to provide feedback on the content, clarity, and pacing.

Discussion

This project has improved instruction in my course by introducing core concepts to students before class sessions, preserving our valuable face-to-face time for discussion and activities. Student response to the online modules, as measured by the student evaluations, has been very positive. One student commented, “I’m not sure I would have grasped some of the theories discussed in the readings as quickly without the help of the online module.” Another shared, “I liked being able to go at my own pace. Sometimes something would distract me and I was glad that the module wouldn’t progress until I clicked.” Data from the student evaluations also indicate that students are viewing the modules multiple times (before reading, after reading, after class discussion, when writing papers, etc.).

The inclusion of video interviews with authors we are reading for class has been a highlight for students. The clips introduce the authors, and they are no longer simply names in print or titles of theories. A student in the class reflected on remarks from Dr. Marcia Baxter Magolda on her self-authorship framework, which were included in one of the modules: “It’s wonderful to have a face with the material - it helps personalize the material instead of it just being a formula to plug in. I also liked hearing about her journey...she’s real just like us!”

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**“Loneliness Seeking Communion”:
Narrative “Pedagogies of Suffering” in Undergraduate Interprofessional Education**

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Sharon A. Cumbie, Wendy E. Miller, *Department of Nursing, Appalachian State University*

Abstract: In spring 2012, the lead author facilitated a class of 22 undergraduate professional students in an Honors College seminar on “Narrative and the Caring Professions.” A broad and inclusive definition of the “caring professions” assembled a group of astounding diversity, including future practitioners of medicine, dentistry, nursing, counseling, occupational therapy, physical therapy, nutrition, social work, and teaching. The other two authors of this presentation are serving as co-researchers in the collection of qualitative data from the experience (reflective writing, discussion transcripts, interviews) and its analysis. This session will explore preliminary insights resulting from this interprofessional experience in narrative curriculum, with particular focus on the principles that informed course design and text selection and the pedagogical choices that were best suited to this unique context. Reading lists and additional resources will be provided to practitioners interested in incorporating narrative elements into their own curricula.

Literature Review

The undergraduate student beginning her preparation to join a “caring profession” is profoundly alone. Isolated within a high-modern ambit of competencies to master and outcomes to deliver, our institution’s future caregivers are overwhelmed by the still-imagined demands of their future responsibilities. They are largely unable to cognize how the *episteme* and *techne* their programs seek to develop in their minds and hands will ever evolve into the *metis* of the experienced caregiver (Scott, 1998). Even more remote is the possibility that the student will actually “find himself” in this process: that despite the profession’s drive to produce in him a “new relation to the world” through a “lasting estrangement” between who he is becoming and who he used to be (Holt, 2004), the student will nonetheless be able to bring “who he is to what he does” (Palmer, 2000).

In *The Wounded Storyteller*, Frank (1995) observes that “the pedagogy of suffering begins its teaching from a ground of loneliness seeking communion.” He offers this “pedagogy of suffering” as a conceptualization of how the giver and receiver of care share a reciprocal bond that fulfills both their deep needs. Through understanding that “one who suffers has something to teach...and thus has something to give (p. 150),” agency is restored to the recipient of care, rescuing her from the “administrative systems that cannot take suffering into account because they are abstracted from the needs of bodies” (p. 146). And conversely, acknowledging what the sufferer has to teach relieves the heroic caregiver from the weight of having to solve all things. Those previously classified as either omniscient giver and passive recipient are both liberated into a new way of mutually constituting their being, one deeply rooted in the capacity to connect that is called to action in each: “when an illusion of oneself as the beginning and end of all things can no longer be maintained, then openness to communion is all that is left” (p. 154).

Goals and Objectives for the Practice Session

At the end of this session, participants will be able to:

- Describe research into the impact of narrative curriculum on preparation for the caring professions;
- List the elements of a successful interdisciplinary narrative curriculum;
- Reflect upon sites in their current teaching responsibilities where narrative curriculum might improve communication competence, capacity for empathy, and self-care dispositions among students;
- Synthesize next steps that they might implement in their courses.

Description of the Practice to be Exemplified

In spring 2012 the lead author facilitated a class of 22 undergraduate professional students in an Honors College seminar on “Narrative and the Caring Professions.” A broad and inclusive definition of the “caring professions” assembled a group of astounding diversity, including future practitioners of medicine, dentistry, nursing, counseling, occupational therapy, physical therapy, nutrition, social work, and teaching, and two years of institutional support

allowed for the thoughtful interdisciplinary creation of an innovative curriculum for them to experience (Osmond et al, 2012).

The course drew upon narrative medicine theory as articulated by Charon (2006), who finds that narrative work develops in students the “readerly skills to follow a narrative thread,” to “adopt multiple and contradictory points of view,” and to “tolerate stories’ ambiguity” (p. 194). Pedagogically, the course emulated the Maine Humanities Council’s “Humanities at the Heart of Health Care” model for facilitating sharing and communion among practicing health care workers (Bonebakker, 2003). We read equal parts narrative medicine theory and stories and poems about the experience of giving and receiving care, with explicit attention to the ways that the medical perspective illuminates clinical, ethical, and personal dilemmas common to all our fields. We also read two sustained memoirs of professional formation in very different contexts: *Body of Work* (Montross, 2007), a physician-author’s reflection upon her first-year gross anatomy class, and *Educating Esmé* (Codell, 2009), a teacher-author’s reflection upon her first year of public school teaching.

Discussion

The other two authors of this presentation are serving as co-researchers in the collection of qualitative data from this experience (e.g., reflective writing, discussion transcripts, interviews) and its analysis. Initial findings suggest insight into the unique value of reading across disciplines in the name of understanding one’s own. Particularly interesting is the response to the two book-length memoirs and the places where understanding of one’s own field is enlarged by understanding the practice of another. The estrangement of different contexts seems to have led students to grasp core principles more deeply when they encountered them in unexpected places. We are also beginning to discern the pedagogical choices that were better or worse suited to the learning needs of these students, and noting their implications for how best to undertake deliberately interdisciplinary work in other settings.

But the deepest understanding that is emerging from this work is how broadly we were all participants in a kind of “pedagogy of suffering” with each other as we moved between feelings of competence and helplessness throughout the course. The uneven levels of knowledge and comfort in each other’s fields effaced the usual, discipline-bound expectations of expertise and “having the right answer.” Instead, we made a genuinely intersubjective exploration of the common dilemmas that each future caregiver will engage in practice: how to access compassion while not giving oneself away; how to empathize across disparate experiences and comfort levels; how to balance obligations to beneficence and autonomy; how to function as a whole person working within an institution in light of the fact that “the functions of a profession are not necessarily those of the institutional structures that house it” (Palmer, 2007). We look forward to sharing these insights with other practitioners interested in exploring how these core dilemmas reflect upon their own curricula.

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Flipping: The Comfortability and Workable Aspects in Higher Education

Prema Gaikwad, *Department of Education, Adventist International Institute of Advanced Studies, Philippines*

Abstract: This study, conducted in an international graduate school in the Philippines, explored the *comfortability* and *workable aspects* of a partially flipped doctoral class (of 13 participants, from 9 countries) in an education course for a term (8 weeks). Data was gathered through questionnaires (pre and post flipping), journal entries, and observations. Both quantitative and qualitative data analysis was carried out to find any change in the perceptions on the comfortability and workability aspects of flipping. Findings suggest a significant improvement in the comfortability aspect of flipping with no significant improvement in the workability aspects. Participants appreciated the ownership and autonomy in learning and found the follow-up to learning (in the classroom) more meaningful as they received support from peers and the instructor.

This research study was motivated by the challenge that Reeves (1998) presented to educators more than a decade ago. Reeves called for research-focused studies for “improving teaching and learning through media and technology The purpose of such research is to improve, not to prove” (Executive section, p. 4). In the context of this study, flipping was seen as a platform to experiment with both educator-suggested and learner-generated activities that utilized media and technology in an andragogical setting.

Literature Review

Flipping as an educational tool is increasing in its popularity (Brinkley, 2012). Originally the brainchild of Jonathan Bergmann and Aaron Sams (Information about the Flipped Classroom, n.d.) as a remedial strategy for students who missed classes, flipping has been accepted as a regular classroom practice in a number of schools, colleges, and universities. A typical model of flipping moves lecture material through online delivery, extends conversations out of class through online discussions, and uses classroom time for applications and doing “homework” guided by the instructor (Baker & Mentch, 2000) and supported by peers. The present study used the theoretical model suggested by Gerstein (2011) where the two sides of the flipped class are identified as “educator-suggested” and “learner-generated.”

Strayer’s (2007) study suggested future studies on exploration of the *comfortability* aspects of flipping. The present study provides the view points of the participants in terms of comfortability as well as the technical (workability) aspects of flipping in a higher education setting.

Methodology

Using a mixed method research design, this study examined the comfortability and workable aspects of flipping. The 13 doctoral students in a class in education were the participants of the study. At the beginning of the course, the participants took a pre-test on their perceptions on flipping. Throughout the term, selected segments of the content were flipped; announcements about the subsequent flipped content were generally made a week before or class period before flipping. The educator-prepared materials were the written lectures, powerpoints, and supportive resources as posted on a course webpage (provided by the institution). Readings were assigned from textbooks and the instructor-prepared course compendium. After studying these materials at home, the participants came prepared for the learner-experienced classroom activities which included individual or group sessions such as report writing, comparison matrix, group investigation, roundtable discussion and internet research. Online threaded discussions were posted at the end of each unit (every 2-weeks, after 4 classes). Each of these learner-generated learning activities was assessed. Participants used a reflective journal for recording their reactions to the learning experiences at the end of every class. The instructor used a journal to enter the observation report of the learning activities during flipping. A post-flipping questionnaire was administered at the end of the course.

Data Analysis and Findings

Quantitative data from the questionnaires was analyzed using a t-test which facilitated the comparison of participants’ perceptions on the comparability and workability aspects of flipping. Results, as shown in Figure 1,

indicates that there was a significant improvement in the comfortability aspect of flipping ($p=.033$) (based on a 1-3 Likert scale, where 1-1.67 indicated “disagree” and 1.68- 2. 33 indicated “not sure” and 2.34-3 indicated “agree”). Perceptions on workability were not significantly different.

Qualitative analysis of data revealed that participants appreciated the ownership and autonomy in learning. Most participants reported in their journals that the follow-up activities of learning (in the classroom) became more meaningful as they received support from peers and the instructor. While group activities in classroom went smoothly, instructor observations revealed that individual activities had time-related problems (as some participants needed more time to complete tasks than others).

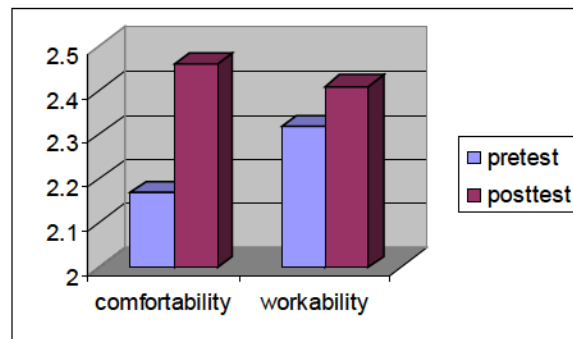


Figure 1. Pre-and-post-test comparison of perceptions on comfortability and workability of flipping.

Discussion

The study points to a positive receptivity to flipping in higher education. While students accept flipping as an appropriate tool for instruction, the procedural aspects of flipping need to be carefully implemented. If the entire flipping schedule of the course is organized and communicated to students at the beginning of the course, and then implemented as planned, students may consider them as more workable. Accommodating for completing individual assignments in class need creative alternatives.

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**The Blended Education Collaborative: Building Innovative Pathways to Learning
As Scholarship of Teaching and Learning (SoTL)**

Len Bogner & Bucky Dodd, *University of Central Oklahoma*

Abstract: The idea of the Blended Education Collaborative began with three corresponding events. First was a meeting in the spring of 2011 in which the Center for Professional and Distance Education (CPDE) at the University of Central Oklahoma (UCO) in Edmond was meeting to discuss the future of Flex Education (formally correspondence education and Interactive Video Education). The second was in the summer of 2011 and the idea of using a Multi-Mode Delivery (MMD) format, in which a course could be delivered using both Online and Interactive Video Education; and finally the opportunity to work within the Academic Affairs Leadership Fellowship program to collect ideas and date on the future of Blended Education. It was found that the Blended Education Collaborative could provide both the University and its students a greater level of flexibility in learning for adult distance education students.

The Blended Education Collaborative project originated specifically from a need to examine how self-paced online courses (SPOC) and interactive video courses (IVC) were being offered to students. But its focus grew to a discussion about blended education at UCO; and how to define it, and how to educate students using it and how to implement it.

From the Blended Education Collaborative a framework for offering “Blended Education” at UCO was created. The next logical step was to conduct SoTL research on the methodology.

It has been determined that the idea of "Blended Education" is not new; however, the use of it as a course format at the UCO is giving adult distance education students the most flexibility possible in their learning experience. A university approved online course with an Interactive Video Education (IVE) component that is offered at a consistent time each week that creates the Blended Education format.

Literature Review

Blended learning is a well-discussed topic in current higher education contexts. Just as online education has found its place in the mainstream of many higher education institutions, the science and art of blending online with classroom instruction is also providing an important trend that merits critical discussion. There are conferences, journals, and countless newsletters touting blended learning as the next big major trend to reshape how students learn.

While many of these publications provide unique and insightful contributions to the body of knowledge, the topics of discussion, in large part, are quite simple and are primarily focused on the instructional design strategies involved with combining online elements with classroom interactions. The goal of blended learning is to leverage the strengths of multiple instructional approaches. Online is typically used to deliver content, while the classroom is used as a forum for discussion and critical analysis.

Blended learning is a positive move toward better learning and, to some degree flexibility; however, researchers and practitioners in this domain often fail to acknowledge the complexities that exist in the broader learning context. For example, a faculty who blends an online component with a classroom component leverages the benefits of efficiency and effectiveness in the learning environment; however, neglects to consider the connections that exist on micro-learning events, program-level, and institutional level contexts. Often, as in this example, blended learning is an isolated approach to learning and rarely represents systematic strategies aimed at building a cohesive learning experience across individual and group learning experiences.

This research makes a critical contribution to the body of literature by placing emphasis on *what* and *how* connections are built into the design of learning experiences so students have the most flexible learning experiences possible while still maintaining a high degree of “humanness” and exemplary learning results. The emphasis on

choice and flexibility in blended education are important drivers for adult learners and represent key strategic positions of higher education institutions in the coming years.

Blended education is a broader concept than blended learning because it acknowledges the considerable complexity involved in learning across institutional and diverse landscapes. This approach promotes the construction of knowledge by intentionally connecting how learners access educational opportunities with principles of instructional design, adult education, and strategic management. On a conceptual level, blended education is intended to support the most flexible forms of learning possible while improving student learning outcomes based on alignment of delivery method with learning and instructional intent.

Methodology

The power of blended education is not focusing on the different instructional delivery methods, but rather the design of intentional connections between those methods.

Research Purpose

The purpose of the research is to examine student experiences with blended education delivery approaches. Blended Education courses use multiple delivery formats such as online, interactive video, classroom, and self-paced online content to create an interconnected, multi-modal learning environment. To date, this is a prototype instructional method that is currently advanced through anecdotal evidence.

Research Questions

- R1: What is the demographic profile of students taking blended education courses?
- R2: How do students participate in blended education courses through the use of multiple delivery options?
- R3: What are students' perceptions of blended education courses?
- R4: What factors may influence student acceptance or usefulness of blended education courses?
- R5: What strategies can be used to improve the instructional design of blended education courses?

Design

A quantitative, survey-based research design will be used for this study. The investigators will use Action Research approaches to examine student experiences in courses using blended education methods. A purposive sampling methodology will be used to recruit participants based on their enrollment in courses using blended education methods. The instrument created was based on evidence of a literature review.

Instrument

An online instrument was created using Qualtrics survey software licensed to the University of Central Oklahoma. The research instrument consisted of 32 questions using both quantitative and qualitative inquiries. Questions were developed to collect demographic information including the distance the student would need to travel to attend the course on campus. Questions on technical competency and comfort were asked as well as questions on instructional methodology. Finally questions on student satisfaction with Blended Education were examined.

Data Analysis and Results

To be collected in two rounds during the Fall 2012 semester; the first round will be in Block 1 (the first 8 weeks of the semester), the second in Block 2 (the second 8 weeks of the semester).

Discussion/Conclusion

The preliminary results from the first round of research show a very positive response to the blended education format. The response rate was around 40%, with an even distribution of males and females and a good scattering of ages (18-65). Two rounds of data will have been collected and disseminated by the time of the conference.

Thursday

February 7, 2013

Session 9

1:30-2:20 PM

Presentations:

In Between Classes: Engaging Student Learning in Unconventional Settings
Cosgrove, E., and Elmer, L.

*Reflective Practice, Critical Writing, and Collaborative Knowledge:
Blogs for Active and Engaged Learning*
Mollin, M., and Sparrow, J.

Contemplative Classroom Pedagogies for Improving Attention and Focus
Mountin, S.

Creating Engaging Classrooms and Inspiring Future Teachers
Robinson, A., Rosenkrantz, S., Martin, C., Bear, B., Guldin, S., Simonetti, J.,
Piilonen, L., Glasson, G., Brand, B., and Amelink, C.

Student-Written Case Studies: A Win-Win for Faculty and Students
Kaufman, E.

You Do What? Interprofessional Education for Improved Teamwork in the Real World
Krajnik, S., Brennan, K., and Epperly, R.

Where is the Human Connection in Online Course Pedagogy? A Feminist Perspective
Glass, V., and McCann, B.

*How White Students Learn about Race and Privilege:
Curricular and Co-Curricular Experiences*
Robbins, C.

<http://www.cider.vt.edu/conference/>

In Between Classes: Engaging Student Learning in Unconventional Settings

Emily Cosgrove & Laura Elmer, *Office of University Writing, Auburn University*

Abstract: This panel will examine and exemplify a model of programmatic change by focusing on a university-wide initiative that aims to change the cultural of writing and writing instruction within a large land grant institution. Using the seven interventions provided by Dr. Bob Doppelt's foundational text, *Leading Change toward Sustainability: A Change Management Guide for Business, Government and Civil Society*, as a theoretical lens, the panel will give specific examples of how these interventions can be applied to work in the academic setting in order to create deep cultural change that can be sustained and strengthened over time. Further, the panel will consider how thinking through the lenses that this model provides can strengthen or limit the change efforts specific to this university-wide initiative.

Goals & Objectives

Upon completion of this session, participants will be able to:

1. Define & describe the models of institutional change as created by Doppelt
2. Model strategies for structuring different types of programs outside of the classroom to sustain and further institutional change
3. Consider how practices and methods that this model provides could strengthen or limit change efforts

Description of the Practice

Using Doppelt's seven interventions, we describe his plan for institutional change giving specific examples from this university's initiative to change conceptions of writing:

- Intervention 1: "Changing the dominant mindset" – The initiative changed concepts of writing and writing instruction through this university-wide initiative within this organization that in general devalues new campus initiatives in favor of maintain the institution's "status quo."
- Intervention 2: "Rearrange the parts of the organization" – Specifically, in the case of this institution, each department rearranged the ways in which they required writing in their courses. In addition, from a more universal standpoint the university reorganized the way in which student receive writing instruction and tutoring at this university.
- Intervention 3: "Alter a company's goals" – This institution altered curriculum necessary for a successful graduate by focusing on written communication as essential to the educational experience inside and outside the classroom at this university.
- Intervention 4: "Restructure the rules of engagement" – This institution created a number of strategies with which to accomplish the new goals of the writing initiative. Some of the strategies were at the department level, some were course-based and some happened even outside the classroom, including the ePortfolio Ambassador Project and graduate student WriteFest sessions.
- Intervention 5: "Shift the information flows" – Prior to this initiative, conceptions of writing were only taught in composition courses and no developmental resources were available to faculty. However, once the Office of University Writing was created, this office became the hub for all materials and resources related to writing and the study of writing across disciplines.
- Intervention 6: "Correct the feedback mechanisms" – Prior to the implementation of the writing initiative, this institution's external feedback mechanisms were NSSE results and memos from employers that were displeased with the writing skills of the university's alumni. Now, those closely involved with the programs can continually learn the affects of change, and from that improve outreach, programming, and overall

structural efforts through formative and summative assessments, as well as process notes from those closely aligned with specific projects within the initiative.

- Intervention 7: “Finally, after the previous interventions have been completed, ‘adjust the parameters’” – At this institution, institutional change crosses a place at which Doppelt’s lenses are limited because the writing initiative could not have grown simply through faculty and student incentives. Instead, this model displays top-down implementation, but grew incentives out of the different strategies to “reorganize” and “alter goals” in that through buy-in and participation in the initiative faculty members and students have had the opportunity to participate in research studies, attend conferences, and publish on their new work; additionally, the initiative is in the process of establishing and implementation awards and recognition for exemplary student eportfolios that grew out of this organizational change.

Discussion

- In what ways has your home program or department sought buy-in from the college or university at large?
- What aspects of Doppelt’s model could be implemented into your institutional change initiatives?
- What limitations do you notice?

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Reflective Practice, Critical Writing, and Collaborative Knowledge: Blogs for Active and Engaged Learning

Marian Mollin, *Department of History, Virginia Tech*
Jennifer Sparrow, *Learning Technologies, Virginia Tech*

Abstract: This session will explore the use of individual blogs and an aggregated course blog as a tool to increase students' reflective practice and critical writing skills. The aggregated course blog allows all of the student blogs from the course to be collected and viewed in a single website. This collection of student blogs allowed for some unanticipated benefits. For the first time ever, students were reading other students' writings, commenting on their peers' works, and referring to their classmates' postings and their prior work in their subsequent blog posts. This collaborative knowledge and historiographical thinking is a desired learning outcome, however, the technology of the student blogs and the course blogs made this much easier. This session will include a demonstration of these learning outcomes. Participants will be provided with extensive examples of how blogs are being used to increase active and engaged learning across a variety of disciplines. Additionally, participants will have access to the "getting started" materials that are provided for faculty and students for blogging with Wordpress.

Literature Review

This workshop is grounded in research in both student engagement, digital fluencies, and social-cognitive learning theory. Kuh and Astin reported that student learning is positively correlated to the quality and quantity of student engagement. Bandura (1993) reported that cognitive processes and decision making, interaction between students and the environment, and clear outcomes of learning are critical for student success. The blogging platform allows for students to reflect upon their learning and to interact with other students to shape their decision-making process. Further, Rogers (1982) in his nondirective teaching model, found that students benefitted from insight, action, and integration of newly acquired knowledge. Student engagement is facilitated through the dialogue allowed by these tools, the collective intelligence gathered from the dialogue, and the utilization of these tools in teaching and learning. Additionally, the Committee on Information Technology Literacy and Crockett, Jukes and Churches have reported that students must become fluent in technology. They need to move beyond just the ability to simply consume digital information, to become creators and authors of information.

Goals and Objectives of the Session

At the conclusion of the session participants will be able to:

1. Explore the student blogs for three semesters
2. Compare the course blog with the individual student blogs
3. Identify the learning outcomes that were enhanced with the blogging tools
4. Critique the use of blogs in his/her own discipline.
5. Understand the basic steps for creating student blogs and an aggregated course blog.

Description of the Practice to be Modeled

This session will explore the effective integration of blogging technologies into a history course at Virginia Tech. A critical aspect of this senior seminar, are the in-class student discussion that were framed around the previous weeks' readings. To ensure that students were prepared for these discussions, the professor had assigned short papers that were due at the beginning of class. These short papers were successful in getting students prepared for the course discussions, however, the students had no way to effectively share their work with other students, nor to reflect on the development of their perspectives throughout the course.

The professor created an aggregated course blog (<http://blogs.lt.vt.edu/hist3106s12/>) that included information about the course, instructions for getting started with blogs, and blogging guidelines. The first week of class, the blogs were introduced to the students, and the blog addresses were collected for aggregation on the course blog site. Once the blogs were aggregated, students could visit the course blog to see other the other students' writings for each assignment. Students were tasked throughout the semester to read the other students' blogs and to make connections between their own opinions and perspectives and their classmates' writings.

Discussion

This experiment for the Fall 2011 semester has been continued for all subsequent semesters due to both the planned and unplanned outcomes. The planned outcomes included getting students to embrace 21st-century digital technologies, to have students prepared for the in-class discussions, and to improve student writing. The unplanned consequences of this project included improvements in the quality of student writing, interaction between students, reflection over time by students on their own learning, and expediency in faculty feedback on student work. These unplanned consequences alone were enough to warrant the project. Students were easily able to learn the technology. The embedded media including pictures and videos into their writing, which made the writing more interesting and meaningful. At the time of the presentation, the project will have been ongoing for 4 semesters and students have commented positively on the blogging assignment in their final course evaluations.

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Contemplative Classroom Pedagogies for Improving Attention and Focus

Susan M. Mountin, *Center for Teaching and Learning/Theology, Marquette University*

Abstract: In an increasingly busy, noisy, and connected world creating oases of quiet, peace, and attention can improve student ability to focus and concentrate. Some would call these contemplative practices mindfulness practices, meditation techniques or reflection; others might talk about the power of silence to enhance focus. Teachers in any discipline can intentionally teach and use moments of silence and awareness to diffuse a contentious conversation, allow time to process a difficult concept, value the comment of a student, settle a class, review the learning of content, or bring a sense of humanity to the classroom. This interactive session will explore and practice powerful contemplative pedagogies applicable and appropriate for everything from nursing and physics to history, English and philosophy. It will also introduce or hone teacher competence through experiential learning. Finally, participants will explore why quieting ourselves as teachers is as important as providing spaces for quiet for our students and how can shared practices like these enhance student learning and teaching as well.

Literature Review

In 1998 Parker Palmer published his popular book *The Courage to Teach*. This pivotal text unleashed a national conversation about teaching and learning. Palmer suggested that teachers need to “create spaces” for deep learning: intellectual, spiritual, and emotional. While his work focused on “the inner landscape” of the life of the teacher, he raised compelling arguments about what happens in a college classroom and in the educational process. This inner landscape of the student and the faculty member is often lost in contemporary education methods which have focused on John Dewey’s instrumentalism and William James’ pragmatism. The interplay of the life of the mind and the heart in the process of education has become weaker in the sole quest for problem solving. One way of reinvigorating this important connection (mind and heart) is through the use of contemplative practices (meditation) to promote deeper focus and attention.

Contemplative practices in both western and eastern traditions from the desert fathers and mothers to ancient and contemporary eastern practices have existed for centuries. Parker Palmer and Arthur Zajonc posed this question for educators in *The Heart of Higher Education*: “How can higher education become a more multidimensional enterprise, one that draws on the full range of human capacities for knowing, teaching, and learning; that bridges links between knowing the world and living creatively in it, in solitude and community?” They identified a variety of practices drawn from western tradition like meditation, lectio divina, listening, story-telling, and contemplative writing. From the eastern and Buddhist traditions come sitting meditation and mindfulness and compassion meditations. Zajonc, a physicist from Amherst College, argued in *Contemplative Practices in Higher Education* that contemplative pedagogy “makes conscious use of a wide range of practices for two essential ends: the cultivation of attention and emotional behavior and the development of faculties required for insight and creativity” allowing for a healthier and more insightful mind. Fourteen years ago, he and a bevy of colleagues from across disciplines formed the Association for Contemplative Mind in Higher Education at Amherst College that offers workshops, institutes and retreats to “train the trainers” (teachers) in contemplative practices.

The task for educators is about transforming education from a “banking model” to one in which students are invited to “make meaning” of the vast amount of knowledge they do acquire over time. (Johnson 2011). Contemplative pedagogy serves another function: to offset the negative effects of the technological age which presents little time to think or process the massive amounts of information that cross human eyes and ears each day. Instructional Technology teacher David Levy from Washington State University argued that “when we are not giving our full attention to anything it reduces our humanity and effectiveness.” Levy presented the contemporary paradox between having speedy access to an enormous body of information coupled with less and less time to think about and process the information.

A growing interest in the use of contemplation for brain function, attention, and deep learning has arisen in the last decade. Scientists began to explore the connection between meditation/contemplation and brain function. Studies in cognitive processes and neuroscience, many of which have been conducted at the University of Wisconsin, Madison

suggest powerful brain connections are made for those who meditate (Lutz, Slagter, Dunne, and Davidson). The on-line Journal of College and Character devoted its October 2012 issue to “Thematic Issues on Contemplative Practices & Studies in Higher Education.” Many texts cover a range of practices applicable to multiple disciplines and in multiple settings for community colleges to four year colleges to ESL programs: *Teaching with Joy*, *Educating from the Heart* introduce the novice to ways of thinking about teaching and learning in multiple disciplines and drawing from many practices. In Fall 2010 the journal *New Directions for Community Colleges* devoted an entire issue to “Contemplative Teaching and Learning.”

While entire courses may be devoted to teaching contemplative practices, it is not always practical or possible for that to occur in many disciplines. What is more feasible is the addition of moments and minutes of contemplation or meditations drawn from a range of practices that invite students to slow down, breathe, sit still and develop some practiced focus amidst a busy and noisy world. This is not purposeless activity but redirects focus and energy to develop students of deeper character, stronger ethical principles, and an ability to face the challenges of the contemporary world.

Goals and Objectives

By the end of this session participants will be able to:

- Name contemplative practices suitable for classroom use
- Demonstrate several examples of contemplative practices for classroom use
- Summarize advantages to using contemplative practices for deeper learning
- Evaluate appropriate uses of contemplative practices
- Discern reasons (the why) of contemplative pedagogies

Description of Practice to be Exemplified

This interactive session will contextualize the conversation about the how but the why of contemplative pedagogy in higher education. Participants will engage in hands-on experiences of contemplative practices that can be used in classrooms in a variety of disciplines to improve attention, and focus, (for instance a mindfulness exercise, contemplative writing, deep listening, and an end-of-class reflection).

Discussion

Participants will engage in a constructed purposeful conversation designed to explore reasons for contemplative pedagogy in today’s culture/society, to entertain how to begin such practices “with baby steps,” and to wrestle with resistance points in academe.

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Creating Engaging Classrooms and Inspiring Future Teachers

Alma Robinson, Sam Rosenkrantz, Chris Martin, Brandon Bear, Seth Guldin, John Simonetti, Leo Piilonen
Physics Department, Virginia Tech
George Glasson, Brenda Brand, *School of Education, Virginia Tech*
Catherine Amelink, *Dean's Office, College of Engineering, Virginia Tech*

Abstract: The need for more STEM majors and improved K-12 STEM education is clear. This presentation will discuss how early teaching experiences has encouraged physics students to consider teaching as a career, improved their own content knowledge, and reformed both university and K-12 classrooms to be more student-centered and engaging. Through the PhysTEC project, a national program to recruit and train future physics teachers, the Virginia Tech Physics Department and School of Education have paired together to encourage physics students to participate in a multitude of early teaching experiences at both the K-12 and collegiate levels. During this presentation, some of these students will discuss the role of these early teaching experiences on their own education and their interest in pursuing a career in teaching. The participants will then engage in a discussion on how they can implement similar strategies in their departments to encourage reformed teaching in collegiate classrooms as well as to recruit and train future K-12 teachers in their disciplines.

Literature Review

The National Academies has outlined top recommendations to secure the United States' future in a global economy. These include vastly improving K-12 STEM education through teacher recruitment and training as well as increasing the number of students graduating with STEM majors (National Research Council 2007). To address these demands, the American Physical Society (APS) and the American Association of Physics Teachers (AAPT) have partnered together to create the Physics Teacher Education Coalition (PhysTEC) project, a national organization dedicated to improve and promote the education of future physics teachers.

PhysTEC institutions have shown great success in increasing the number of physics teachers graduating from their schools and implementing reformed teaching practices into both high school and collegiate classrooms (PhysTEC Project Synopsis 2012). Early teaching experiences, pedagogical content knowledge, and a learning assistant program are key components of this success. Research has shown that institutions that adopt learning assistant programs have shown an increase in the number of STEM majors entering into teaching, and students who become learning assistants (LAs) show a marked improvement of content mastery over their non-LA peers (Otero, Finkelstein, Pollock, and McCray 2006). As in-service teachers, former LAs also demonstrate a higher level of reformed teaching practices than their counterparts, as measured by the Reformed Teacher Observation Protocol (Gray, Webb, and Otero 2010).

Goals and Objectives

During this practice session, participants will be introduced to an array of programs that the Virginia Tech PhysTEC project has implemented. The focus of the presentation will be on the effects that early teaching experiences have on the participating students' physics content knowledge, interest in teaching, and evolution of their teaching philosophy. The presenters will also discuss their role in reforming introductory courses. Conference participants will then discuss the teaching and learning goals of their individual departments and brainstorm how they can adopt similar strategies to meet those goals at their institutions.

Description of Practice

We will begin by exploring the research-based benefits of key PhysTEC programs and how we have implemented them at Virginia Tech. These include transformed introductory classes in physics and astronomy, a physics-specific pedagogy course, a Learning-Assistant program, and a number of early teaching experience programs. We will also discuss how the PhysTEC project has encouraged an increased focus on education in the physics department.

Through formal and informal assessment and evaluation efforts tied to Virginia Tech's PhysTEC program, we were able to capture the impact that the program was having on the students. Themes that emerged from individual and group student interviews underscored that early teaching experiences were related to pursuing teacher licensure. In this session, four students will highlight their experiences in the following programs/courses (<http://www.phys.vt.edu/PhysTEC>):

1. Physics Outreach and Enriched Physics Outreach – Courses for undergraduate students to visit local schools to excite K-12 students in science with physics activities, lessons, and demonstrations.
2. Learning Assistant (LA) Program – Successful undergraduates work with faculty to help facilitate collaborative, interactive and student-centered learning environments in their classes. Many of these LAs are physics majors who were taught introductory physics using the SCALE-UP (Student-Centered Active Learning Environment for Undergraduate Programs) model (<http://www.ncsu.edu/per/scaleup.html>) and already have experience with learning in a reformed, student-centered classroom.
3. Physics Teaching and Learning Course – A physics pedagogy course taught by the Physics Teacher in Residence designed for pre-service physics teachers, learning assistants, and graduate teaching assistants with an emphasis on physics teaching and physics education research. Through this class, education-focused talks/workshops by the students and guest-speakers are presented to the physics faculty.
4. Master's Degree in Science Education – Undergraduate physics students who are interested in K-12 education may begin taking graduate education courses during their senior year and earn a Master's Degree in Science Education in one additional year. These students also have the opportunity to participate in the FIRST Robotics competition, a partnership between Montgomery County Public Schools, the Mechanical Engineering Department, and the School of Education to mentor high school students through an authentic technical design/problem-solving experience.
5. Graduate Teaching Assistant (GTA) in Physics Department – Both graduate physics students and physics education students may be given tuition support by serving as teaching assistants in the physics department. Through this experience, GTAs are required to teach labs, recitations, and/or hold office hours. In addition, these students are encouraged to enroll in the Physics Teaching and Learning class.

Discussion

The effect of early teaching experiences on students has proven to be both a successful recruiting and training tool for future STEM teachers. Conference participants will be asked to brainstorm how these programs could be adapted to fit their departments through the following discussion questions.

1. How can my department utilize our majors to help increase the effectiveness of our undergraduate courses? How can we best utilize our graduate students?
2. What can we do to encourage our best students to consider teaching as a career?
3. What role can my department have in improving K-12 STEM education and/or encouraging more students to graduate in STEM fields?

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Student-Written Case Studies: A Win-Win for Faculty and Students

Eric K. Kaufman, *Agricultural and Extension Education, Virginia Tech*

Abstract: More and more faculty are finding benefits from engaging students in writing case studies. Case studies are commonly used to promote an active learning experience, and engaging students in writing case studies extends the learning benefits. Furthermore, as faculty continually search for current, relevant cases to share with their students, engaging students in writing such cases expands the pool from which to choose. This teaching and learning practice session will highlight student case writing assignments as a tool for bolstering contextual education resources and promoting student learning. The presenter will share an example framework and scoring rubric for case development assignments. Session participants will discuss best practices and share ideas and insights on related resources.

Introduction & Review of Literature

Faculty support for student-written case studies is continuing to grow, with increased evidence of the benefits. According to Vega (2010), “student-written cases are powerful pedagogical tools that can lead to improved understanding..., more informed analysis, emphasis on reflection, and clearer expository writing” (p. 574). Ashamalla and Crocitto (2001) posit that engaging students in writing case studies “has various benefits, including moving the focus of learning onto the student, bridging the gap between theory and practice, improving writing and analytical skills, promoting lifelong learning, addressing the weaknesses of the traditional case analysis in the implementation of alternatives and reflection on one’s perceptions and behaviors, and enhancing teacher-student partnership in the learning process” (p. 516). In a review of student case writing as an assessment tool, Rosenbloom (2005) reported that students who were assigned case writing found the exercise to be both demanding and rewarding. Students summarized their experience by saying:

- “It was challenging – and one of the few times I felt like I was actually tested on something I learned with tools I was given here!”
- “It makes you use your critical thinking skills and in most classes you don’t. It helps to build your mind and makes you think of ideas what *you* would have to expand on!” (Rosenbloom, 2005)

Both faculty and students seem to agree it is “the best way to learn” (Ross, Zufan, & Rosenbloom, 2008, p. 459). These findings suggest an opportunity to further expand student case writing assignments beyond traditional fields (Kearins & Collins, 2009). Faculty from a wide variety of disciplines could incorporate student case writing assignments into courses that seek to connect theory and practice.

Goal and Objectives

The goal of practice session is to highlight student case writing assignments as a tool for bolstering contextual education resources and promoting student learning. By the end of the session, participants will be able to:

1. Identify the benefits of student case writing assignments,
2. Describe an appropriate framework and scoring rubric for student case writing assignments, and
3. Find appropriate resources and guidelines for student case writing assignments.

Description of the Practice

In my classes, the case writing assignment is generally assigned to a group of students as a semester-long project. The assignment includes three deliverables: a case study prospectus, the case narrative, and teaching notes for the case. Among these, the overall grade is weighted most heavily on the teaching note. However, all three components are critical to the overall project. The case study prospectus outlines the overall scope of the case, allowing the instructor to provide valuable feedback on the merits of the case and the students’ overall progress. The case narrative serves to clarify the case subject and context; it presents readers with essential background and outlook information as well as key decision points. The teaching note is the primary driver of deeper learning and the pivotal place for students to demonstrate their course learning. Preparing and writing each of these documents as a student group is a challenge, but tools are available to assist with this process. Specifically, I recommend students

use wikis so that progress and contributions of each student can be easily recognized and evaluated. The structure of each document follows rubric criteria included with the assignment (e.g., Figure 1).

Figure 1. Example scoring rubric for a student-written case prospectus.

Criteria	Points Possible	Qualities of an A-Level Submission
Introduction	10	<ul style="list-style-type: none"> Identifies the topic, scope, and setting of the intended case. Clarifies how and why the team selected the case topic and site (i.e., organization).
Purpose & Objectives	15	<ul style="list-style-type: none"> Outlines a specific teaching purpose for the case and multiple learning objectives. Demonstrates a clear connection to multiple course concepts.
Story/Abstract	15	<ul style="list-style-type: none"> Offers a 2-3 paragraph introduction to the case site and major issues or problems. Highlights a course-related issue, set within the past five years.
Case Content	15	<ul style="list-style-type: none"> Includes a bulleted outline of the headings and content anticipated for the case and teaching note. Identifies central characters and key decision-makers in the case. Outline follows a format appropriate for case studies, similar to the one offered by <i>Writing Case Studies: A Manual</i> (1999).
Research Plan	15	<ul style="list-style-type: none"> Outlines a timeline, complete with deadlines and person responsible for each task. Identifies primary and secondary sources to research about the case.
Opportunities & Constraints	10	<ul style="list-style-type: none"> Highlights key opportunities, such as interviews or organizational collaboration, that will likely strengthen the final case report. Recognizes likely constraints, such as access and time limits, on ideal research and development of the case.
Appendices	10	<ul style="list-style-type: none"> Includes reference list, formatted in APA style. Presents other tables, figures, and/or resources relevant to the case.
Writing & Overall Impression	10	<ul style="list-style-type: none"> Focused narrative, no more than 3,000 words. Submission is free from structural, grammatical, and spelling errors that might otherwise distract the reader.
Total	100	

Discussion

Student case writing offers great promise as a tool for facilitating learning, particularly in areas of study where few published case studies exist. More research is needed to verify the benefits of student case writing assignments. However, in the meantime, we can continue to perfect the practice share related tools and resources with others.

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You Do What? Interprofessional Education for Improved Teamwork in the Real World

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Abstract: Across most industries, today's college graduates are expected to work effectively in interdisciplinary teams comprised of professionals from varying knowledge orientations. This practice session will demonstrate ways in which interprofessional learning activities can be used to engage students and faculty in sharing specific knowledge between disciplines using a collaborative, case-based problem-solving process. A description of an interprofessional educational symposium attended by undergraduate and graduate health and human services students will be shared to illustrate one model of collaborative interprofessional learning. Using a case specific to their professions, participants will identify key content and processes within their disciplines in order to educate/share with others in related professions.

Objectives

Upon completion of the session, participants will be able to:

1. Explain the trends and value of interprofessional education for today's workplace.
2. Discuss effective interprofessional learning approaches.
3. Identify content and process elements of interprofessional learning activities that facilitate student engagement within their own disciplines.
4. Develop a broad concept of an interprofessional learning session, specific to their own disciplines, using a case study.

Literature Review

- Architect, construction project manager, civil engineer, structural engineer, interior designer.
- Accountant, lawyer, chief financial officer, marketing manager, information technology specialist.
- Nurse, social worker, speech language pathologist, occupational therapist, physician, physical therapist.
- High school educator, school psychologist, district administrator, vocational specialist.
- Biologist, physicist, computer programmer.

These groupings of professionals have one vital element in common. They are all interprofessional teams formed to maximize a process or product outcome. Interprofessional refers to the manner in which people from different professional disciplines collaborate on common work projects or service goals (Guile, 2012). Rarely in the current professional realm do individuals work solely with members of their own discipline, trained in the same theoretical and practical applications, to do similar work processes. Across most industries, today's college graduates are expected to work effectively in interdisciplinary teams comprised of professionals from varying knowledge orientations. Students in higher education spend a great deal of time learning about their own profession, but much less time learning what their colleagues do and when to call upon these other disciplines in order to maximize service or product outcomes.

Much of the literature addresses training in interprofessional practice for individuals already in the workforce. However, interprofessional education has been gaining momentum within the higher education setting as reflected in recent literature. The goal of interprofessional education is to equip graduates with the competencies necessary for collaborative success in the professional workplace (Guile, 2012). The literature supports interprofessional education in the higher education setting for improved outcomes related to understanding of other's roles, collaboration and teamwork, and self-efficacy for interacting with colleagues from other disciplines (Dufrene, 2012; Zucchero, Hooker, Harland, Larkin, & Tunngley, 2011).

Description

Terminology in the literature varies across industries, i.e. interprofessional, interdisciplinary, multidisciplinary, work teams or groups, and relations versus practice. Despite the variability in vocabulary, novice professionals need skills

critical for success in fast-paced environments, such as a solid understanding of one another's professional roles, competent skills to negotiate areas of overlap among professions, and the ability to work jointly toward shared goals. This practice session will demonstrate how interprofessional learning activities can be used to engage students in sharing discipline specific knowledge using a collaborative, case-based, problem-solving model. A synthesis of the scholarly literature will be presented that illustrates the trend toward and value of interprofessional education. A description of an interdisciplinary educational symposium attended by undergraduate and graduate health and human services students will be shared to illustrate one model of collaborative interprofessional learning, where students act as both learner and teacher, with expert faculty facilitation. The presentation will include details of the knowledge gained from the planning and implementation of the symposium, including preliminary outcome data.

Discussion

Following the presentation, participants will work in small interprofessional groups to brainstorm how they might structure an interprofessional learning opportunity for students within their own school or college. Components for participant group discussion will include the following.

- Broad areas of pertinent content within members' disciplines that are perceived as vital to share with other potential professional team members.
- Potential disciplines with which participants' students could realistically engage in an interprofessional learning experience.
- Case studies or scenarios that could provide rich interprofessional exchange.

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Where is the Human Connection in Online Course Pedagogy? A Feminist Perspective

Valerie Q. Glass & Brandy McCann

Abstract: One component of feminist pedagogy is building a connection to students and providing an interactive environment where power is challenged and individuals are valued (e.g., Allen, 1988; Enns & Forrest, 2005). Online teaching and pedagogy challenges many feminist faculty and instructors who value human connection in the classroom. This qualitative study explored the responses of 39 faculty members who teach various disciplines at institutions nationwide. Participants were asked about their experiences teaching online, as well as their perceptions of how this format was (or was not) conducive to building in the human element of feminist pedagogy into online teaching and learning. With a few exceptions, results indicated that participants felt, overwhelmingly, that there was something missing in regards to a human connection in the online environment. Both challenges and successes are explored in the context of current research on building connection within online courses.

Background

Over the next 5 to 10 years, online courses will likely make up about 20% of course offerings at most major institutions (Sener, 2010). This has forced college educators to look more closely at the pedagogical strength in online course development. In addition, this has led to faculty, who espouse a feminist pedagogy, either rejecting to adapting their courses to online learning, leaving out certain components of feminist pedagogy in order to adapt to these changes and demands, or finding unique ways to build feminist pedagogy into their online learning (McAllister, 2009). Faculty instructors are faced with the challenges of recreating human connections from face-to-face classrooms into their online courses, and we found that many dismiss the opportunity to bring a feminist pedagogy online. This has left some feminist educators without mentors and role models to assist them in their course creations. Despite this, some participants in this study found ways to build in human emotion, human connection, and faculty presence to their online courses.

Methodology

We sent an online survey to instructors nationally who taught from a self-defined feminist pedagogy. The survey identified how participants felt about bringing elements of their feminist pedagogy to the online environment. Thirty-nine participants completed the survey. We analyzed the data using a phenomenological approach.

Data Analysis

Almost all participants (n = 30) shared that they were frustrated with different elements of human connection in online pedagogy. For example, Deborah summarized the struggle many instructors felt:

I feel it [online instruction] is too impersonal—you cannot see the students' faces and you lose a huge component of human interaction ... a human connection and recognition of humanity is important for feminist pedagogy.

Related, a few participants shared that they wanted those immediate and connecting responses integral to their feminist pedagogy in face-to-face classrooms. For instance, Jessica said that what is missing in the online environment is the “question and response in real time, a visceral sense of belonging to a community of learners.” Michelle stated that the “the embodiment and performance element is missing from the online teaching and learning experience.” Kenya shared similar frustrations of what she felt was missing, the “face to face conversation—bodies intermingling and learning non-verbally.” More than anything else faculty participants struggled with the almost indescribable connection of physical bodies—the physicality of teaching and learning –when reflecting on teaching online using a feminist pedagogy.

Discussion

One term related to human connection in online learning was coined by Pelz (2010), is “presence” (p. 135). “Presence” includes social bonds are established in the online environment. One way to achieve this is for instructors to facilitate chat rooms in a way that brings out individuality. Other researchers and instructors are exploring how some aspects of human elements can be built into their online courses. One example of research exploring bringing in the human element is the integration of emotion into discussion forums (Do & Schallert, 2004; Zembylas, 2008). Also, certain techniques have been identified as positive ways to build in human connection, including cross-country collaborations in courses (Maher & Hoon, 2008) and having students build in components of their personality and identity into assignments (Chick & Hassel, 2009). Likewise, some participants also noted ways they felt they were able to successfully build in some aspect of human connection to online learning. These techniques and suggestions will be discussed in our presentation in hopes of building on and continuing the dialog related to how to build in human elements to online learning.

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How White Students Learn about Race and Privilege: Curricular and Co-Curricular Experiences

Claire K. Robbins, *Educational Leadership and Policy Studies, Virginia Tech*

Abstract: Although many White post-secondary students learn meaningful lessons about race and privilege, little is known about specific curricular and co-curricular experiences that contribute to student learning and related gains in multicultural competence. The purpose of this social constructivist case study was to investigate curricular and co-curricular experiences among White women in higher education and student affairs (HESA) graduate programs. Findings include 22 educational experiences reported by participants as influential in their learning about race and privilege. These findings have implications for educators seeking to foster multicultural competence among White post-secondary students.

Introduction and Literature Review

The racial and ethnic composition of the college-going population reflects growing proportions of African American, Latina/o, Asian and Asian American, Native American, and multiracial students (A profile of this year's freshmen, 2011). Seeking to prepare students for an increasingly diverse world, educators have identified *multicultural competence* as a critical outcome of higher education (Pope, Mueller, & Reynolds, 2009). Post-secondary educators have long sought to facilitate gains in multicultural competence (Ortiz & Rhoads, 2000). However, White students often resist such efforts, especially when they are not developmentally ready to accept the concept of White privilege (Ortiz & Rhoads, 2000; Watt, 2007). Given the changing racial composition of colleges and universities, resistance to multicultural education is especially problematic among White students preparing to become college educators. Developmental and curricular models (e.g., Hardiman, 2001; Ortiz & Rhoads, 2000; Watt, 2007) suggest that White individuals can overcome resistance and develop an awareness of racial realities. However, among White HESA graduate students, little is known about post-secondary curricular and co-curricular experiences that facilitate understanding of race and privilege and contribute to gains in multicultural competence.

Thus, the purpose of this social constructivist case study was to investigate what students learn about race and privilege in college and graduate school. Specifically, the researcher explored curricular and co-curricular influences on students' learning about race and privilege among White women enrolled in HESA master's degree programs. Only White women were included in this case study and a larger grounded theory study of racial consciousness, identity, and dissonance among White women in HESA programs (Robbins, 2012). This decision was intentional because Students of Color constitute a growing proportion of the college-going population, yet the face of the student affairs profession remains overwhelmingly White and female (Remm & Jessup-Anger, 2008).

Methodology and Data Analysis

This study was conducted using a social constructivist case study methodology. *Social constructivist* researchers seek understanding through the interpretation of individual experience (Creswell, 2007). As a qualitative methodology, *case study* involves the investigation of a "bounded system" (Stake, 1995, p. 2) aimed at "understanding and portraying the case" (Stake, 1995, p. 57). In this social constructivist case study, the researcher defined the bounded system as the educational experiences of White women in HESA graduate programs.

Participants in this study were 11 White women, ages 23 to 28, enrolled full-time in their third of four semesters in a HESA master's degree program (with no two participants in the same program). Maximum variation sampling (Creswell, 2007) facilitated the construction of an inclusive sample of individuals whose social identities, educational experiences, and other life experiences reflected multiplicity and difference. Data sources included two interviews with each participant. Initial interviews focused on participants' race- and Whiteness-related experiences during childhood, high school, and college, while follow-up interviews explored participants' post-college, professional, and SA/HE graduate school experiences. Data analysis procedures involved coding all transcripts for post-secondary curricular and co-curricular experiences that participants connected to their growing understanding of race and privilege. Codes were then sorted, categorized, and distilled into essential themes.

Findings

Table 1. Influential Curricular and Co-Curricular Experiences in College and Graduate School

College		Graduate School	
Curricular	Co-Curricular	Curricular	Co-Curricular
Social science coursework	Student government	Coursework: reading	Graduate assistantship (GA): difficult dialogues
Service-learning	Multicultural student organizations	Coursework: written reflection assignments	GA: leading global service trip
Study abroad	Resident assistant position	Coursework: difficult dialogues	GA: teaching students about race
Faculty mentors with race-related interests	Residential programming related to diversity	Faculty mentors with race-related interests	Advising Students of Color
	Professional mentors with race-related interests	Professional mentors with race-related interests	Pre- and professional conferences
	Pre-professional conferences	Summer internships in new geographic context	Joining a historically Black sorority

When discussing “pivotal moments” in their growing awareness of race, participants identified 22 curricular and co-curricular experiences in college and graduate school. They shared richly textured descriptions of mentors who “opened my [their] eyes” to racial realities, difficult dialogues in their graduate courses, and conferences that made participants “aware of my [their] identity.” Through these and many other experiences, participants overcame resistance and learned powerful “life lessons” about race and privilege.

Discussion and Implications

For participants in this study, college and graduate school offered powerful curricular and co-curricular experiences that facilitated learning about race and privilege. Although consistent with prior research on racial attitudes among White students, findings from this study offer new implications. First, educators should provide opportunities for White students to have intentional conversations about race with role models and mentors. Educators should also provide opportunities for sustained dialogue about race and difference, pairing dialogue with individual reflection. Third, student and academic affairs educators should redouble efforts to create seamless learning experiences that bridge curricular and co-curricular realms. Finally, when seeking to facilitate student gains in multicultural competence, educators should focus not only on skill development, but also on opportunities to practice these skills.

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Thursday

February 7, 2013

Session 10

2:40-3:30 PM

Presentations:

*Leveraging Pedagogical Expertise and Quality of Technology Based Design
Education Using Online Video in Course Content*
Foster, S., and Halbstein, D.

*Using Student Generated Video to Enhance Feedback, Instruction
and Assessment of Psychomotor Skill*
Mickle, A.

*Motivation Through Mentoring: Faculty Mentor Project for Promoting
and Supporting Move to Online Learning*
Baab, L., and Katz, B.

Building and Sustaining Community Engagement Across Courses and Programs
Clements, T., and Bohannon, C.

*Redesigning a Didactic Course for Case-Based Learning:
Learning Resources Enhancing Veterinary Students' Intra-Operative Decisions*
Choi, I., Park, H., Lee, Y., Ju, H., Schmiedt, C., Cornell, K., Radlinsky, M., and Creevy, K.

Retrieval Practice and 3D Stereo Images Enhance Learning Online
Kolitsky, M.

Challenging Pedagogies During Crisis: Multiculturalism, Its Limits and Alternatives for Change
Sanchez, J.

Cultural and Linguistic Challenges Emirati and Saudi Students Face in U.S. Universities
Al Murshidi, G.

<http://www.cider.vt.edu/conference/>

Leveraging Pedagogical Expertise and Quality of Technology Based Design Education Using Online Video in Course Content

Shaun Foster & David Halbstein
3D Digital Graphics, Rochester Institute of Technology

Abstract: Increasing standards for quantity and quality of content per class have been accelerated by a progression of new technologies. Educators continually deal with the question: "How can professors optimize their contact time with students in order to focus on more subjective design and aesthetic areas in classes where a constantly evolving set of technical tools and processes are a key element of student success?" Faced with a continually evolving set of technical tools, and the need to foster the practical quantitative understanding of those tools within a traditional lecture/lab format, the issue of balance between the technical and the aesthetic has become increasingly challenging.

The explosion of growth in online video tutorial content has opened up new avenues for instantaneous delivery of current technological information. By facilitating access to this online content, we ensure that our students are exposed to the most current technical training, and we continue to maintain our focus on the aesthetic core of our curriculum.

Objectives

Upon completion of the session, participants will be able to:

- Identify situations where using online videos would leverage the education process
- Recognize reasons for student gaps in knowledge where a video would be better than text based material
- Develop strategies and rules of thumb for developing video content
- Evaluate and implement screen, video and recording from a list of resources provided by the presenters.

Description

This presentation deals with the balance between technology and art in the classroom. While our ultimate goal is aesthetic, we still must devote a substantial amount of time to helping our students develop fluency with the tools at hand. Mastery of the technology is a critical part of our students' education, but it is a small part of the whole. Traditionally, text based tutorials have been used to augment lectures, and these tutorials are frequently specific to certain software packages. The rate of change of software and hardware has made the rate of obsolescence of these printed materials a concern, necessitating the implementation of university-wide "upgrade strategies". (Rai and Terpenney). The use of online video content has proven to be a viable method for quantifiable information delivery, and in most cases, can take the place of printed technical material. (Khan).

Care, however, must be taken to ensure that the content of the assigned videos is initially comprehended, and subsequently reinforced with hands-on application. A study regarding the time course of knowledge retention among physicians indicates that "Education that appears successful from immediate posttests and learner evaluations can result in knowledge that is mostly lost to recall over the ensuing days and weeks. To achieve longer-term retention, physicians should review or otherwise reinforce new learning after as little as 1 week." (Bell, Harless, et al)

Based on these conclusions and on our own evaluation, we have maintained but modified our "lecture/lab/homework" model of instruction to incorporate online videos that fall into three distinct categories:

- Commercially available (subscription based) software training tools
- Free content, uploaded on discussion forums by recognized experts in the field
- Specific videos, created and produced by faculty on-site, addressing ongoing challenges that students face in the classroom

As a supplement to the above categories, students are encouraged to seek their own videos to contribute to the class. In this way, students and faculty in an individual program of study can cooperatively construct a dynamic online reference library that is current, focused, and self-regulating (O'Neill and Gammon).

The presenters will show examples of all three categories of online video instruction and discuss the methods for inclusion in our curriculum, including strategies for reinforcement and further study.

Discussion Questions

1. What kinds of information can be relegated to video presentation?
2. What strategies can be developed to test and/or reinforce this information in the classroom or lab?
3. Given multiple types of educational videos that were discussed, discuss ideas for applying them to your class
4. A little bit of cinematography and storyboarding knowledge can effectively add narrative aspect to the education process, in what ways can this be integrated into various disciplines?
5. Where do your students hit information roadblocks and in what ways would video help get past these?

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Using Student Generated Video to Enhance Feedback, Instruction and Assessment of Psychomotor Skill: A Preliminary Report

Angela Mickle, *Department of Exercise Sport and Health Education, Radford University*

Abstract: Students studying to be health care professionals are required to demonstrate the ability to perform clinical psychomotor skill. This presentation will discuss the advantages that student generated video can have on instructor feedback, teaching and student assessment. This presentation will detail how iPads have been used in labs to allow students to video skill in two separate courses, with example videos presented. The bulk of this presentation will detail how these videos have been used to provide feedback to students, develop class materials, remediate instruction and assess critical thinking on exams.

Literature Review

Psychomotor clinical skill performance is a key component of professional education for students pursuing health care professions including nursing, physical therapy, and athletic training. As a consequence, educators in these areas are consistently faced with the challenge of how to evaluate clinical skills and, more importantly, how to help students engage in self-evaluation of those skills. Video has been described as a way to supplement the practice of clinical skill and positively impact learning (Grierson, Barry, Kapralos, Carnahan and Dubrowski, 2012). Students who can watch themselves perform skills have a better educational experience, are more competent and have higher learning motivation (Yoo, Yoo, & Lee, 2010; Edwards, Jones and Murphy, 2007). In addition, students report that watching their own or their peers' skill performance is objective and helpful tool for learning (Brimble, 2008).

Goals and Objectives

At the end of this session, participants will be able to:

1. Develop a laboratory session that incorporates student generated video
2. Identify methods for providing students with skill feedback
3. Develop strategies for using student generated video to evaluated instructional content
4. Identify simple and quick methods for storing and using the video
5. Identify uses for the video in class discussion, written tests and practical exams.

Description

This presentation will discuss how I have used iPads to obtain video of student clinical skills in two separate athletic training courses. Specifically, I will discuss how I have designed laboratory sessions that require students, working in small groups, to video specific skills they are attempting to master. I will share examples of actual videos that have been taken in lab, and discuss how I have used them to help students critically analyze both their performance, and the performance of other students. I will also discuss how I have used these videos (and still pictures from them) to promote classroom discussion, devise classroom activities and evaluate critical thinking on tests. Examples of all of these will be used in the presentation. I will share the method that I have developed to quickly store and access the videos with iPhoto.

Discussion

In my field of athletic training, and in multiple health professions, students are faced with the reality that psychomotor clinical skill is as important as didactic information. However, while they can repeatedly refer to written sources to review cognitive content, it is difficult for students to see and evaluate their clinical skill performance. Traditional methods of using video have involved expensive laboratories, cameras and computer equipment. iPads allow students to take their own video, and getting these videos in a user-friendly format takes a matter of minutes when using iPhoto. The video can then be employed in class for multiple purposes. When students see a skill being performed incorrectly, it forces them to focus on the details of the task and to figure out exactly what is wrong. This process promotes critical thinking. Furthermore, I have found that by assessing the video I can clearly see gaps in students' understanding of the skills. I use this to remediate instruction and focus student attention on key performance factors. This has proven helpful for students on subsequent practical

examinations. I have also used videos (and still captures from those videos) on written exams to assess students' critical thinking skills.

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Motivation through Mentoring: Faculty Mentor Project for Promoting and Supporting Move to Online Learning

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Abstract: Moving to online learning often requires a cultural shift and is met with resistance when faculty are not sure of the quality of learning, commitment of time and focus, rewards and challenges, etc. Each discipline and program within a discipline has particular concerns and encounters unique challenges with regard to offering online courses and programs. To address these concerns and meet these challenges, the Institute for Distance and Distributed Learning at Virginia Tech initiated a Faculty Mentor program. In its pilot year, the Faculty Mentor program began in the College of Engineering, Civil Engineering programs. This presentation will offer description of the model and a discussion of the challenges, progress and potential of this approach. Participants will be able to discuss with the project manager and the Faculty Mentor for Civil Engineering how this approach can be applied or adapted for utilization at their institution.

Literature Review

The practice of mentoring for faculty in higher education has long been recognized as effective for supporting faculty professional growth and adoption of new ideas and practices (Boice, 1992). However, to be most successful, mentoring must be aligned with the specific and unique characteristics of the culture and environment of the faculty to be mentored (Luna, G. & Cullen, D., 1995). When the mentoring process is customized to suit specific needs of faculty in specific content areas, the realization of the desired outcomes and impact of the mentoring process can be achieved to a higher level (Johnson, W. B., 2007).

The Faculty Mentor project created and managed by the Institute for Distance and Distributed Learning (IDDL) is based upon the concepts and processes of a Community of Practice (CoP). A CoP, as described by cognitive anthropologists Lave and Wenger (1998), consist of a group of people who share an interest, a craft, and/or a profession and exists to foster the growth of the practice through the initiation and support of those entering the practice by those who are considered 'masters' of the practice in a process that is founded upon mutual respect and the desire to contribute to the quality of the practice. The CoP shares not only a common interest and passion but also knowledge and resources. In doing so, the CoP contributes to and expands the knowledge base and access to resources so that all members of the community can improve their practice. Members of a CoP interact regularly so that this can occur. Faculty Mentors, as envisioned in this project, are members of both the learning community comprised of faculty teaching in a common field or area of study and of the larger CoP in which the practice is teaching online for Virginia Tech.

Objectives

Upon completion of the session, participants will be able to:

1. Develop similar plans for motivating and supporting faculty to develop online courses by utilizing or adapting the model presented.
2. Apply lessons learned from the development of this model to the development and initiation of a similar model and process.
3. Develop strategies to encourage adoption of this or a similar model of motivating and supporting faculty developing online courses

Description

In this model presented, Faculty Mentors are asked to support faculty in the same field of study or content area who are new to the practice of teaching at a distance and as many faculty who are currently teaching at a distance or are interested in learning more about teaching at a distance as requested by the program, department or college. Faculty Mentors establish a learning community that will contribute knowledge and resources to the larger Community of Practice in which the practice is teaching online.

During their time of service, Faculty Mentors:

- Serve as consultant and liaison to support services of faculty investigating online teaching and learning.
- Assist faculty in the process of developing online courses.
- Recommend best practices and successful approaches to teaching both resources and personal experience.
- Arrange and manage events, discussions, and learning opportunities for faculty considering or in the process of developing or teaching online courses
- Lead a Faculty Inquiry Group focusing on specific issues and challenges of teaching online for a specific discipline or program of study.

Faculty Mentors can serve as the ‘eyes and ears’ of their department or program to identify issues and concerns, services and support needs, and potential areas for professional development so as to continue to improve support of faculty teaching at a distance and the assurance of quality in distance learning. It is important to note here that there is no evaluation of faculty as part of this program. Faculty Mentors are asked to be supportive and provide guidance, extended communication, intervention to resolve issues, and to assist with quality assurance beyond instructional design. They are in no way to be viewed as a means of evaluation or a source of criticism by the faculty they are mentoring. Mentored faculty MUST be empowered to speak openly and honestly. Faculty mentors must be responsible for relevant and respectful responses and support.

So as to assess the project and better understand how to provide continuous improvement and support, surveys and interviews will be conducted to obtain data from Faculty Mentors and those faculty being mentored. Data will be collected on faculty perceptions of, attitude toward, and likelihood to teach online courses. This data can provide insight into the areas in which professional development needs are growing, areas of concern, challenges and issues to be addressed as well as innovations and exemplary practices for teaching at a distance in general and within specific areas. The expected outcomes for the Faculty Mentor project include:

- An increase in faculty interest in and understanding of issues, challenges and opportunities for online learning.
- Quality assurance of distance learning courses extending beyond instructional design to include practices and strategies during the teaching and learning process,
- Improved support for faculty new to teaching at distance and continued support for those who continue to teach at a distance,
- Expansion of the knowledge base for teaching at a distance in general and in specific fields or area of study,
- Extended opportunities for faculty collaboration on research and funding, and
- Identification of new initiatives and opportunities to utilize online learning for program growth.
- A strong Community of Practice for faculty teaching at a distance in which they share expertise, knowledge, resources, and research opportunities.

Discussion

Generalized best practices and research-based strategies exist for developing and teaching online courses but faculty face unique issues and challenges in specific disciplines. Can access to a Faculty Mentor, experienced in online teaching in the same discipline offer customized advice, support, resources, etc. while extending the means to assure quality online teaching beyond the instructional design of the course?

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Building and Sustaining Community Engagement Across Courses and Programs

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Abstract: Building effective engagement relationships between communities, faculty and students with sometimes conflicting community, research and learning goals requires time, dedication and flexibility. These efforts may be difficult to develop as mutual trust, sustained interest and on-going participation are not guaranteed. This practice session will illustrate lessons learned in building local community relationships across programs and across courses. Participants will review models of community engagement that are integral to teaching and learning goals and pedagogy. One model integrates community engagement throughout a single course and is repeated with a different community with each offering. The other integrates community engagement across courses, either simultaneously or sequentially, with an emphasis on sustaining a single community relationship. The last model starts in a course and expands to influence student and faculty extra-curricula engagement activities.

Literature Review

Institutions of higher education have demonstrated community involvement in a variety of ways including: cooperative extension, outreach, and student volunteer initiatives. All too often the connections forged between universities and their surrounding communities are not long lasting because traditional views of knowledge do not genuinely engage non-academic partners (Bringle, Games, & Malloy, 1999; Thomas, 1998). In 1990 Ernest Boyer admonished the academy to “become a more rigorous partner in the search for answers to our most pressing social, civic, economic, and moral problems, and must reform its historic commitment”. As a result, a number of higher education institutions have renewed interest in promoting university-community initiatives, community engagement, and civic responsibility (Boyte & Hollander, 1999). This shift in academic work emphasizes a broader definition of scholarship that incorporates teaching, research, and service; this scholarship of engagement provides a platform for academic work to benefit communities (Boyer, 1996; Bringle, Hatcher, & Games, 1997). This new emphasis, based on authentic engagement with communities to help address identified needs, is more systematic and comprehensive than in previous attempts. Furthermore, experiential and participatory learning opportunities for students have placed a greater emphasis on a pedagogy that is rooted in real-world experience. An increase in the number of university-community partnerships can be a significant indicator of successful community engagement, but it is more important to cultivate healthy and lasting relationships. University-community partnerships are complex. According to Bender, complexity arises from the different ways in which each group generates knowledge and solves problems (Bender, 1993). An effective community engagement project is one that clearly demonstrates reciprocity between faculty, students, and community partners and emphasizes respect of all involved, particularly the role of community members as co-educators. Incorporating effective community engagement components into the core of a course requires building a new sense of community and an awareness of the complexities of working with multiple agendas.

Goals and Objectives of the Session

Participants will gain insight about teaching, learning and research goals related to student and faculty engagement with communities directly involved in course and extra-curricula activities. Participants will review models of community engagement that span across course offerings and others that are repeated with different communities. They will be able to discuss the opportunities and pitfalls of tying community engagement into the primary pedagogy of the courses as this relates to (1) student and faculty teaching, learning and research, and (2) delivery of tangible products to the community in exchange for their active involvement in the teaching and learning. By completion of the session, participants will have learned methods to develop community trust and involvement over a course, as well as sustaining the engagement to span numerous courses within an academic program and across programs. Participants will be able to conceptually diagram course learning objectives and their relationship to community participation, to other courses, and to goals and products for the community.

Description of Practice

Participants who attend this session will learn some of the complexities of tying community engagement into the core of a course as the presenters model the creation of a two community engagement processes. One repeats the engagement process with a different community each time the course is offered. The other model spanned multiple courses, two academic programs and continues to reach out into independent student projects and other extra-curricula activities. In each, participants will learn about developing a place for engagement, linking course teaching and learning objectives to community needs, and implementation strategies.

Participants will be encouraged to actively discuss and critique the models for further development, while at the same time learning approaches to community building for increasing effective community engagement.

Discussion

Successful local community engagement using coursework requires a ‘meeting’ of community needs and goals, faculty teaching – and perhaps research – goals, and student learning objectives. When working best, the results can be inspirational and transformative for all. When not perfectly meshed, participants must be flexible, recognizing that all may not be accomplished. However, if the community and faculty are willing to sustain longer-term relationships across more than one semester or across more than one course, the results from the initial development can provide a longer, more substantial payback. In disciplinary programs with courses having sequential learning objectives, faculty can design problem sets that build upon knowledge learned and the other project data from preceding courses. It’s also possible for faculty to link across programs. This session features a set of courses linked by a sequence of course engagement projects undertaken with a local community. Students engaged with local residents to collect local oral histories, develop community capital plans, conceptual site development plans, and implement designs into physical spaces.

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**Redesigning a Didactic Course for Case-Based Learning:
Learning Resources Enhancing Veterinary Students' Intra-Operative Decisions**

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Abstract: Case-based, technology-enhanced learning resources have been developed to assist veterinary students in making intra-operative decisions - especially decisions with more than one solution. This is important ability that many students do not master before graduation. This innovative case-based learning environment, developed through a collaboration among faculty members in Small Animal Medicine and Surgery and a faculty member and researchers in Educational Psychology and Instructional Technology, promotes problem-oriented experiences to enhance situational knowledge through video-based surgery cases, cognitive apprenticeship to enhance strategic knowledge through experts' opinions and their storytelling, and just-in-time learning to enhance content knowledge through on-demand dynamic textbook. The impact of the learning resources will be broad, as it will also serve as continuing education for interns, residents, and practicing veterinarians. The pedagogical framework can be used for other courses facilitating problem-solving and decision-making processes in dynamic situations.

Problem Contexts: Four Challenges in Producing Competent Veterinary Surgeon

In the current learning environment, we observed the following four challenges in training our students in surgery. First, due to the lack of time and resources, both lecture-style and laboratory instruction have its own limitations. Lectures can cover broad content knowledge but it cannot deliver rich situational and strategic knowledge. Alternatively, laboratory experience can enhance rich situational and strategic knowledge but not much content knowledge. Second, we observed that students in the 4th year learn through observing real cases, and these students experience difficulty in connecting their basic medical knowledge to clinical problem solving. This is a typical challenge in higher education due to the difference in the nature of problems between classroom problem-solving (well-structured problem solving) and real world problem-solving (ill-structured problem solving). Third, the cases from which that 4th year students will learn are mainly dependent on the cases the surgeon sees during this period. Due to this limited time, a variety of rich cases cannot be covered during the three-week period. Last, it is always a challenge to teach reasoning and decision-making skills beyond the students' content knowledge. The goal of surgery courses is for the students to diagnose the cases and to plan a course of action while applying basic medical knowledge. However, without explicit scaffoldings for reasoning and decision-making, it is not easy to enhance thinking skills in a typical classroom environment.

A Pedagogical Framework: Three Types of Knowledge Integration

In order to overcome the aforementioned challenges, case-based learning resources have been designed primarily based on a pedagogical framework—three types of knowledge integration—that is known as an instructional strategy to enhance problem-solving and decision-making abilities in dynamic, real-world stations (Choi, 2007; 2009). This framework claims that in order to build real-world problem solving abilities or dynamic decision-making skills that can be transferable to another situation, students must integrate three types of knowledge: situational knowledge (knowing contextual information; how to identify, interpret, and evaluate situational cues, etc.), strategic knowledge (knowing what and how to apply/modify rules and theories; monitoring problem solving process and results; how to reason, etc.), and content knowledge (knowing general facts, concepts, principles, theories, etc.) around core principles or fundamental themes of the particular field (Bruner, 1993; Choi, 2007) through continuous cognitive conflicts-and-reconstruction cycles (Choi et al., 2006; Choi & Jonassen, 2000).

Recent learning theories, such as situated cognition (Brown, Collins, & Duguid, 1991), cognitive apprenticeship (Collins, Brown, & Newman, 1989), and constructivism (Jonassen & Land, 1999), emphasize the importance of *contexts* in learning and performance. Knowledge is connected to the situation in which that knowledge is constructed. So when knowledge is constructed in real-world or authentic settings, it is more easily retrieved and

utilized in real-world problem solving settings later (Bransford et al., 1999). Furthermore, within authentic contexts, constructing a deep understanding around fundamental themes or core principles (Bruner, 1993) is critical for interpreting problems in flexible ways and for generating the best possible solutions in innovative ways. Figure 1 demonstrates how three types of knowledge can be integrated through an e-learning interface (Choi, Lee, & Jung, 2008), which is an example of case-based learning module for an orthopedic surgery course. This framework has been revised and applied to the current project.

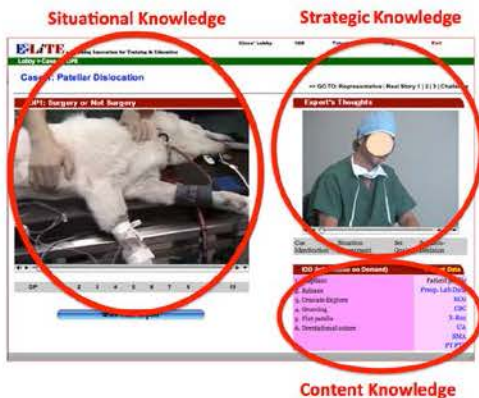


Figure 1. An example of integrating three types of knowledge in an e-learning interface

Learning Group (<http://elearning.coe.uga.edu/>) who have been developing various case-based e-learning environments and its design models in different domains over the past ten years.

An Interdisciplinary Collaboration for the Design and Development of the Learning Resources

This project has been conducted by a team of three soft tissue surgeons who together make up the entirety of the veterinary soft tissue surgery section, a veterinary internal medicine specialist who can offer a non-surgical perspective to case management and problem solving, and a Case-Based E-

Implementation and Discussion

The proposed innovation, which will be implemented through the Internet as supplementary resources during and between the current 3rd and 4th year surgery classes, can help to provide all three types of balanced knowledge, to link gaps between 3rd year classes and the reality of the clinical case, and to enhance students' reasoning and decision-making skills. Indeed, we also see this as a valuable exercise for our post-graduate rotating interns, surgical residents, and for future incorporation into continuing education exercises for practicing veterinarians. This presentation will showcase the design and development process, demonstrate the features of the learning environment, and discuss lessons learned from this project.

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Retrieval Practice and 3D Stereo Images Enhance Learning Online

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Abstract: An online Anatomy and Physiology course was utilized for testing several pedagogical strategies aimed at enhancing student learning in lecture and lab. Retrieval practice in the form of Quizlets (practice quizzes) increased student learning in lecture and lab and the use of 3D images was employed in the lab to simulate more closely a traditional anatomy dissection lab. Data analysis using the Blackboard grade book showed exam score averages in lecture and lab correlated with the average score for the last five Quizlets done and higher grades were linked to the amount of time spent doing the Quizlets (time factor measures minimum verifiable study time). The laboratory experience was enhanced by the option to utilize 3D stereo images termed anaglyph images produced from the Bassett Collection at Stanford School of Medicine Lane Medical Library and the Quicktime Virtual Reality Anatomical Resource at Wright State University School of Medicine. Interactive videos were also created using serial images from the National Library of Medicine's Visible Human Project. Interest was high for using 3D images with averages for lab scores slightly higher (though not statistically significant) for students using 3D images. Red-blue glasses will be available during the presentation for viewing 3D images.

Literature Review

Practice, non-credit, timed quizzes termed Quizlets have been shown for the past four years in both online (Kolitsky, 2008) as well as face-to-face biology classes (Kolitsky, 2011) to enhance student performance on exams. At first glance, Quizlets can be viewed as an online type of flash card strategy but recent studies in retrieval practice, the formative assessment strategy using tests as a way to learn, provide clues that more than simple memorization may be occurring. Recent work (Karpicke and Blunt, 2011) links this type of formative assessment (Quizlets) to retrieval practice which was found to promote learning better than concept mapping, the gold standard for learning in STEM (science, technology, engineering and math) disciplines. At a recent Harvard symposium on their "New initiative for better teaching", Roediger suggested that less studying and more testing enhances learning (Roediger, 2012). For some lab courses such as in Anatomy and Physiology where cadaver dissection would be the ideal way to learn human structure, few undergraduate institutions have the resources or access to cadavers. Many medical schools today spend less time on cadaver dissection to fit in new courses in medical genetics. (Sugand, Abrahams and Khurana, 2010). In response to these pressures, a movement toward use of already dissected cadavers is occurring to save time and there was the appearance in 2012 of the first virtual anatomic touchscreen table sold by Anatomage (Anatomage, 2012)) but its \$60,000 cost will slow its introduction especially at the undergraduate level.

Goals and Objectives for the Practice Session

This practice session will demonstrate how to gather data from the Blackboard grade book tool to study the correlation of student end-of-course numerical and letter grades to (1) the scores for all Quizlets and (2) the time devoted to taking Quizlets (minimum study time). Calculation of R-squared values and graphical analysis methods will be demonstrated. Attendees will also learn how to create 3D anaglyph images from stereo image pairs as well as from Quicktime Virtual Reality videos and evaluate their 3D quality employing red-blue glasses.

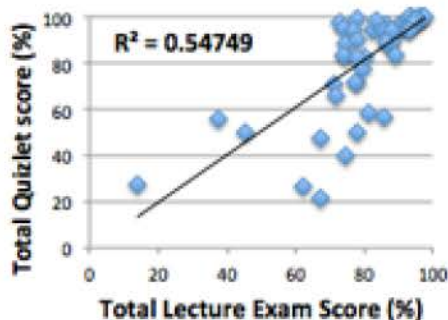
Description of the Practice to be Modeled

I will show how retrieval practice was used in past online and face-to-face courses to demonstrate that enhanced learning was linked to students who did practice quizzes (Quizlets) more and that the exam score was strongly correlated by R-squared analysis to the average of the last five Quizlet scores. If students did the Quizlets enough times and their last five Quizlet scores were in the A range, an A grade on lecture exams was predicted. Knowing this, I decided to encourage students to take the Quizlets many times in a new online Anatomy and Physiology course designed in spring, 2012 by assigning credit for taking Quizlets the number of times I had observed in past courses was predictable for getting an A grade (20 times for lecture, 10 times for lab). The average for the last five Quizlets done along with the time spent doing the Quizlets was used to determine their effect on student learning.

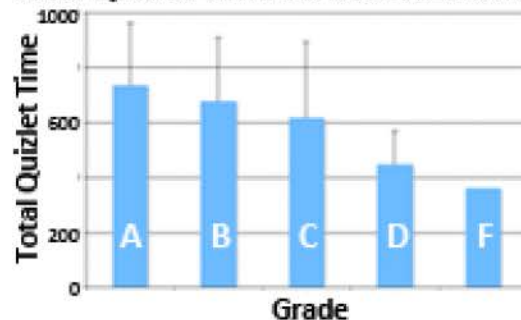
Discussion

The summative exams given in lecture and lab showed a higher number of students performing at the A and B range than in previous classes where no credit was given for doing Quizlets. The left graph below shows an R-squared analysis correlating the total Quizlet score averaged from the last five Quizlet scores for all lecture Quizlets done over the semester with the total exam scores for the entire lecture course. The R-squared value is indicative of a moderate correlation between the scores a student gets on the last five Quizlets of all Quizlets for the course with the points earned from all course lecture exams. The graph below on the right shows that the time (minutes) a student spends doing lecture Quizlets is related to the lecture grade received and measures minimal verifiable study time.

Total Quizlet Score vs. Total Exam Score



Total Quizlet Time vs. Course Grade



It was also observed that students separated into two populations when looking at the time spent doing the first 20 Quizlets in lecture or 10 Quizlets in lab. In lecture, 34% of students ($n = 19$) opened a Quizlet and closed it again within 30 – 45 seconds indicating a preference to study saved Quizlet questions off-line in flash card mode. The average lecture GPA for these students was 2.42 ± 1.35 compared to 3.16 ± 0.986 ($p = 0.0023$) for students ($n = 37$) who used Quizlets in retrieval practice mode as indicated by longer Quizlet taking time. In addition, if fast Quizlet takers were removed when comparing lab Quizlet scores to lab exam scores, the R-squared value rose from 0.6897 (all 38 data points) to 0.74316 while the fast group ($n = 13$) dropped to 0.31059. These observations support the idea that the retrieval practice method for learning in lecture and lab was better than the traditional flash card method, i.e. retrieval practice using the computer was better than the static off-line flash card mode. High quality stereo images (Bassett Collection, 2012) and QTVR videos (QTVR Anatomic Resource, 2012)) were made into anaglyph images viewable in 3D with red-blue glasses. The average lab exam scores for students using 3D images was 97.1% compared to 92.5% for students choosing to study non-3D lab images available for students who cannot see in 3D. Although the 3D average lab exam score was slightly higher, it was not statistically significant.

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Challenging Pedagogies During Crisis: Multiculturalism, Its Limits, and Alternatives for Change

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Today, the experience of academic life and professional commitment to pedagogy is affected by mobility and the instability that a global soured job market brings about. Work opportunities might imply traveling across the globe and contact with unexpected cultures, what implies the opening to broad frameworks of understanding, learning, as well as social values and morals that might clash against our own. In general, these particularities of contemporary academic life are not part of regular curricula in graduate schools, what implies that as students and recently graduated we should embrace open minded pedagogic agendas in a world that narrows more and more the idea of tolerance.

This paper uses intercultural academic experiences, merging realities found in academic environments in England, France, United States and Mexico. These academic contexts are mirrored to problems such as strengthening boundaries for intellectual migration, the economic crisis, and false assumptions about globalization and the supposed openness to learn from others involved in academic life. I sustain that a central feature of today's crisis is the widening chasm between expectations and realities that academics must face, and how the current crisis should encompass innovative alternatives during professional education for teachers of the diaspora.

Cultural and Linguistic Challenges Emirati and Saudi Students Face in the U.S. Universities

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Abstract: The study examines academic, cultural, linguistics and discipline-related challenges Emirati and Saudi students face at U.S. universities and investigate the participants' coping strategies to face their challenges. A mixed methods approach was used to analyze responses from participants using online survey and interviews. The questionnaire results revealed that the majority of Emirati students and Saudi students indicated that their linguistics deficits "rarely" prevent them from classroom participation and shows that the majority of Emirati and Saudi students indicated that gender is not an issue in collaboration. However, the interviews results indicated that the language challenges kept the Emirati and Saudi students silent and afraid to participate in the classroom. Female Emirati and Saudi students stated that they try to avoid interaction with male students in their classroom interaction. Writing is the most difficult aspect the Emirati and Saudi students' face, so to overcome this difficulty they go to writing centers, take more writing courses and use dictionaries to improve their writing. Emirati and Saudi students are "less comfortable" participating in large group discussions, and "comfortable" participating in small group discussion in classes. Some categories are produced from in-depth interviews with six participants, related to academic preparation and literacy; classroom environment; cultural adjustment and gender issues. In general, results show more similarities between Emirati and Saudi students because UAE and Saudi Arabia are global countries and have strong connection with U.S., have similar history of education system reform and similar religion.

Literature Review

The research explores concepts such as cultural adaptation theory, socialization, language socialization, and more specifically, academic socialization, a concept which is understood to be a "situated" process within which college students from various linguistic and cultural backgrounds become socialized or acculturated (Barton and Hamilton, 1998; Gee, 2000). Cross-Cultural Adaptation theory is used to understand "stress-adaptation-growth's" dynamics of cross-cultural experiences, which "bring about cultural strangers' gradual transformation toward increased functional fitness in the host milieu" (Kim, 1988, p. 200). Culture shock is another theory that explains the international students' feelings of anxiety, surprise and confusion when they travel to a foreign country and contact with an entirely different social environment. Initially, they feel unable to assimilate to the new culture, causing challenge in knowing what is appropriate and what is not (Oberg, 1955). Language adjustment refers to the newcomers' acquiring a second language during their social interaction with the hosting people (Yang and Clum, 1994). The emphasis on English is significant because difficulties with English language are often an attribution for one cause of stress experienced by international students. Yang and Clum (1994) stated that among many factors that affect international students' adjustments, language proficiency is the most important determinant. Barrat and Huba (as cited in Mallinckrodt et al., 2008) also found that a high level of language proficiency leads to international students' academic success and adjustment to the host culture. This proficiency enhances international students' performances in classes and feelings of comfort when participating in discussions. Skill with language also facilitates socialization with American peers, who play an important role in international students' cultural adjustments (Mallinckrodt et al., 2008). Mallinckrodt et al. (2008) contended that international students who speak English fluently tend to be less embarrassed and less self-conscious about their accents or ethnic backgrounds, and thus exhibit higher levels of self-esteem and better adjustment.

Methodology

This study used a mixed methods approach (quantitative and qualitative) for data gathering and analysis (Creswell, 2003). It was conducted to further understand the academic socialization process of the Emirati and Saudi students, their social and academic challenges and coping strategies to reduce their challenges. In order to do this, the Gulf region students' Questionnaire was posted online where study participants recruited for the study responded to the survey. The researcher used six participants from the 219 who responded to the survey to accurately personify the social and academic experiences of Emirati and Saudi participants in relation to academic socialization. Descriptive data analysis was used to describe the basic features of the data collected by survey. Inferential statistics using t-tests which was used to determine who have greater difficulty in writing papers in terms of style, grammar, word choice, sentence construction, and organization. Also, t-test is used to examine who are more comfortable in classroom

socialization in terms of working with the same gender, working in large or small group or working independently, etc. For qualitative data, six interviewees provided information that showed the Emirati and Saudi students' educational backgrounds, English language preparation programs, writing difficulties, classroom socialization, advisor/student relationship, strategies to develop their English, etc.

Results and Discussion

The results of the study indicated that Emirati students “rarely” feel that native English speaking students are more competent than they are in classes. However, Saudi students “occasionally” feel that native English speaking students are more competent than they are in classes. Also, Emirati and Saudi students are “less comfortable” participating in large group discussions, and “comfortable” participating in small group discussion in classes. Regarding challenges encountered by Emirati and Saudi Students for writing papers, Emirati students stated that grammar, word choice and sentence construction are “somewhat easy”; however, Saudi students indicated that grammar, word choice and sentence construction are “Somewhat difficult.” The majority of Emirati and Saudi students indicated that gender is not an issue when collaborating with other students. All are comfortable working with a different gender. Saudi public schools and some Saudi universities have not prepared Saudi students adequately to cope with linguistics challenges in U.S. universities. Most Emirati and Saudi students face challenges to achieve U.S. universities' admission requirements (TOEFLS, IELTS, and GRE) while attending language preparation programs. Giving Saudi female students more freedom to deal with personal life differs from country-of-origins' traditions. Saudi male student tried to adjust to the challenges of American culture, which requires independence and completing household chores. Emirati and Saudi female students face communication challenges with male classmates. Emirati and Saudi students face challenges because their experiences in the American educational system differ from expectations with regard to teaching strategies. The students' challenges in their U.S. universities cause the students' dropping out from their studies, which affects negatively on the strategic plans of the Higher education ministry to increase the number of graduate students who build the country.

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Thursday

February 7, 2013

Session 11

3:50-4:40 PM

Presentations:

Learning Literacy from the Inside Out: Exploring Personal Literacy Journeys with Bodystorming
Azano, D., and Horst, P.

Grading by Experience Points: An Example from Computer Ethics
Gehring, E.

Crossing the Divide: Bridging the Distance Between Online Faculty and Students
Thompson, J.

One Size Still Does Not Fit All
Turner, W.

It's Elementary My Dear Watson: Using Case Studies in Higher Education
Dunzweiler, D.

*The Confluence of Pedagogy and Sustainability: Possibilities and Impediments
to Systemic Curricular Changes in Higher Education*
Balthazor, R., Byers, T., Dorison, A., and Quick, P.

Global Service Trips as a Means to Cultural Competency 2.0 and Empathy Development
Dokter, C., and Dirkx, J.

Transformative Instruction Via Study Abroad: Students' Self-efficacy and Global-Mindedness
Walker, T., Osa, J., and Waajid, B.

<http://www.cider.vt.edu/conference/>

Learning Literacy from the Inside Out: Exploring Personal Literacy Journeys with Bodystorming

Amy Price Azano & Paige Hayes Horst, *School of Education, Department of Teaching and Learning, Virginia Tech*

Abstract: This session introduces “bodystorming” (see Azano & Dinkins, 2008), a differentiated pre-writing strategy, which offers a way to reduce writing anxiety in preservice teachers. This flexible brainstorming technique makes visible the connection between our lived experiences and the ways in which we develop our concepts of literacy. Applicable across disciplines and content areas, the strategy encourages reluctant or struggling writers to organize their ideas and engage with assigned writing. This technique offers a non-threatening way for writers to access prior knowledge, brainstorm creatively, and use multiple modalities to increase confidence in their ability to complete writing tasks.

Literature Review

In the arena of higher education, Writing Across the Curriculum has led to a greater emphasis on writing in core disciplines such as mathematics and the sciences. Academic writing can result in heightened anxiety for students, especially those who have low self-efficacy in this area. (Martinez, Kock, & Cass, 2011) Raising the confidence of writers has a positive effect on both writing anxiety and self-efficacy. (Pajares, 2003) In order to lower anxiety and raise confidence, pre-writing strategies encourage writers to engage with writing tasks in supportive environment.

Goals and Objectives

In this interactive practice session, participants will engage in the creative, transactional writing process of “bodystorming.” Used as a pre-writing tool, bodystorming is flexible in application and appropriate to widely different disciplines, classrooms, age groups and assignments. This technique, also known as “body biographies” or “chalk outline,” is particularly effective for encouraging struggling or reluctant writers in both organizing their planned writing and beginning the writing itself. Participants will view student bodystorms in order to have a clear understanding of both process and product. Session participants will be guided through the process of creating their own bodystorms, leaving the session with both a physical reminder of the technique, an understanding of how, why, and when to implement its use, and ideas for using bodystorms in their own content areas and classes.

Description of Practice

The presenters will show examples of student bodystorms, and discuss briefly the actual classroom process of their creation. We will speak about both pedagogical frameworks for the practice and practical application in the classroom. The presenters will lead the participants through the process of creating their own bodystorms, using content area literacy as a central theme. Participants will use butcher paper and markers to outline their whole bodies or parts of their bodies. On the outlines, participants will be encouraged to brainstorm words, phrases, pictures or symbols which are personally meaningful and pertain to the theme of the workshop. We will point out the flexible nature of this practice, and use the participants’ own ideas and interests in order to customize the session. Once the bodystorms have been started, we will close the session with brainstorming ways in which the practice of bodystorming might be extended or used in the various disciplines represented in the session.

Discussion

In exploring the issues of adolescent literacy with our preservice teachers, we encourage them to think deeply about their personal experiences and engagement with their content areas. Creating an exploratory essay examining their journeys in content area literacy is the final class project. Being asked to create a personal narrative produces some apprehension in our students, many of whom come to class with negative or fearful attitudes towards writing. However, writing, in every form, is a vital method of communication across all disciplines and content areas. Knowledge is not power unless one can communicate that knowledge, expertise is not passed on unless it can be communicated. To be able to communicate clearly one’s expertise is a vital component of any profession. Yet discomfort with writing spans the range of professions, socioeconomic status, education level and age. Overcoming this discomfort in the classroom is a perennial challenge for all educators. Bodystorming offers a nonthreatening, enjoyable method to overcome writing anxiety in a creative, relaxed way.

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Grading by Experience Points: An Example from Computer Ethics

Edward F. Gehringer

Department of Computer Science, North Carolina State University

Abstract: In most of education, courses are graded based on percentages—a certain percentage is required for each letter grade. Students often see this as a negative, in which they can only lose points, not gain points, and put their class average at risk with each new assignment. This contrasts with the world of online gaming, where they gain “experience points” from each new activity, and their score monotonically increases toward a desired goal. In the last two or three years, several instructors have moved to grading by experience points (XP). In Fall 2012, the author switched to grading by experience points in his Ethics in Computing class. Students earn points for a variety of activities, mainly performing ethical analyses of various issues related to computing, and participating in debates on ethics-related topics. While the course is still in progress at this writing, indications are that the grading system is serving as a motivator of student involvement, with students eagerly signing up for analyses and investing considerable effort in preparing for debates. The grading system appears to have mitigated the problem of student engagement in this largely non-technical required course.

Literature Review

In his recent book, *The Multiplayer Classroom: Designing Coursework as a Game*, Lee Sheldon (2011) relates the experiences of several instructors, including himself, who have turned their classes into games by awarding credit for activities that help students achieve learning objectives. The concept has been used at levels from middle school to college, and from community colleges to Research I universities. Many of the courses relate to education or educational technology, but they vary from United States history to business writing. McCallum (2010) has also used XP to grade courses. Similar concepts include the Game-Enhanced Learning framework (Charles, Bustard, & Black, 2011) and Game-Based Learning (Pan, Mishra, Yuan, Stackpole, & Schwartz, 2012).

Approach

This semester, we are employing this technique in CSC 379, Ethics in Computing, which is a required one-credit course for Computer Science majors at our university. The course has often been plagued by low attendance. We wanted an approach that would make students delve into the very relevant and often very interesting issues of law, public policy, and personal morality. The instructor is also the originator of the Ethics in Computing Web site, <http://ethics.csc.ncsu.edu> (Gehringer, 2001), which has not been updated since the last time he taught the course in 2008, but remains Google’s top hit for “Ethics in Computing.” There is a need to update the coverage of all ≈ 120 topics discussed on this site. The site has been developed by student contributions, with the topics being updated on a rolling basis every two years or so. But now, with so much time passing between revisions, it is desirable to update the topics in a single semester. In addition, we want to transition the site from one that mainly links to news articles and analyses to one that offers ethical analyses of each issues it covers.

Experience points seemed like a logical choice. Students could gain experience points for each topic that they wrote on (scaled by their score for that contribution). Specific numbers of experience points for each letter grade (for example, 2600 points for an A, 2300 for a B), and, if students need to earn extra points to reach their desired grade, they would merely need to perform additional activities, like analyzing more issues, or reviewing analyses done by



Figure 1. Grading scheme based on experience points

other students. In effect, all work is treated as if it is “extra credit,” having a particular point value. Students could write a maximum of six analyses during the semester, but doing only three analyses will put them on track to earn an A, provided they do “A work” (receive $\geq 93\%$ of the 400 possible experience points for the analysis). Students are encouraged to work in pairs on the analysis. Each member of the pair receives as many points as a sole author would for the same work.

An important part of the student’s task is reviewing other students’ work. Students use the peer-review system Expertiza to fill out a review rubric on the ethical analysis submitted by another pair of students. Each review is worth 50 points, which gives students an incentive to do several reviews. Thus far, each analysis has received about 5 reviews on average, which gives students a good basis to revise their work. After they revise and submit it, the course staff assigns a final grade.

While students earn most of their points for writing and reviewing ethical analyses, they earn points for other activities too. Twice during the semester, they participate in a debate on a topic like, “Resolved: That organizations should configure computer systems so that only IT staff can install software,” or, “Resolved: That computer science programs should teach students how to produce and defend against malware.” There are also quizzes over each week’s reading assignment.

The semester is still in progress, but after the semester, we will have data on the number and length of analyses produced by this class, compared to previous classes; on the number and length of reviews, and how the average score on ethical analyses changed over the course of the semester. We will also discuss student feedback on the grading process.

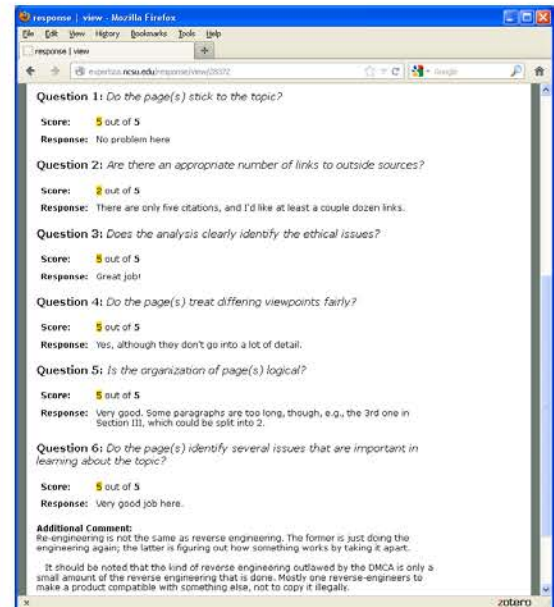


Figure 2. A sample review

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Crossing the Divide: Bridging the Distance Between Online Faculty and Students

Jennifer L.W. Thompson, *Department of Psychology, University of Maryland University College*

Abstract: Discussion on the effectiveness of distance education often focuses on concern regarding student engagement (Chen, Gonyea, & Kuh, 2008; Coates, 2006; Coates, 2007, Vrasidas & McIssac, 1999; Kuh, 2001; Stovall, 2003). While it is true that engaging students in an online classroom can be challenging, there are several tools available today that use multimedia technology to bridge the gap between faculty and learners. It is not enough to simply put these tools into practice, but rather one must also understand how the use of these tools contributes to the desired outcome of student learning. In this presentation, participants will observe several of these tools in action and discuss their potential application in real-world scenarios as a means to increase student engagement in an online classroom.

Outcomes

At the end of this session participants will be able to:

- 1) knowledgeably discuss the role of student engagement in online courses
- 2) effectively apply multimedia strategies in his or her online or web-enhanced course
- 3) understand the potential for implementing these active learning strategies in traditional face to face courses

Literature Review

According to Mandernach (2009) there are several components that contribute to successful engagement in an online classroom. Some of these are inclusion of active learning tasks, interaction between students, and scaffolding of learning experiences. In line with these findings, The Undergraduate School at University of Maryland University College has developed a learning model based on the work of Chickering and Gamson (1987). The learning model addresses several key factors discussed by Mandernach that influence student success and engagement including the acknowledgement of different learning styles, provision of active learning experiences, and promoting time on task. One way to address these variables is by including multimedia technology strategies to engage the learning with the course material. By using the multimedia tools, not only do faculty provide students with different methods for learning the course material, but they can also engage students in active learning exercises and encourage students to spend more time on the material by making it interesting and appealing.

Following Gardner's (1983) Theory of Multiple Intelligences, students may learn materials in many different ways. Some are verbal learners, some are visual learners, some are kinesthetic, and others are eclectic mixes. Using multimedia tools, such as Jing®, Xtranormal®, Voki®, and/or Prezi®, faculty can provide students with different avenues for learning. In addition, by requiring students to read about a concept in their textbook, then listen to a mini-lecture, and, finally, via a video presentation of the application of the concept, those key components are reinforced.

Active learning experiences include those that require students to apply, summarize and reflect while making connection to real world experiences. Multimedia technology tools such as VoiceThread®, Xtranormal®, and Glogster® ask students to creatively express their ideas and requiring them to process the material at a deep enough level that they are able to interpret them for others and demonstrate real world applications.

In terms of promoting time on task, which essentially means that the course assignments focus on activities directly related to learning outcomes, use of multimedia tools such as VoiceThread®, Blogger®, and Twitter® can be used to help students manage their time and to give them different perspectives when looking at the material. The strategies can also be used to reinforce the alignment of the concepts with the intended course outcomes.

In addition to promoting student engagement, use of these multimedia tools can help faculty reinvigorate their own engagement with the course material and encourage them to interact with their students in different ways. Many faculty members are unsure of how to incorporate these technologies in such a way as to integrate them with the course content and be meaningful to the student. In this session participants will view and discuss the incorporation

of several of the multimedia technologies in an online classroom. An emphasis will be placed on how to successfully integrate multimedia tools and strategies to maximize student interest and engagement with the course material. More importantly, the focus will be on the importance of engaging students and the reasons why these tools can be helpful.

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One Size Still Does Not Fit All

Windi D. Turner, *Teaching and Learning, Virginia Tech*

Abstract: Increasingly, research and development in learning theories within elementary and secondary education reveals the significance of differentiated instructional methods; yet, very little attention to this approach has been given in higher education. When it has, the findings have been reassuring (Fraser & Linder, 2009). Differentiated instructional strategies are not only important for primary and secondary level students, but college students can benefit too (Williams-Black, Bailey, & Lawson, 2010). To be sure, a “one size fits all” approach to teaching does not work well in elementary and secondary educational venues. So why would it work in higher education? This interactive session will show you how to put aside those age-old assumptions of lecture mode teaching in higher education in order to engage, motivate, and challenge students.

Literature Review

Students today do not wear watches, read newspapers, carry books, or handwrite. Why should they? They have cell phones, laptops, and iPads. They interact with their friends through social media, they write blogs, and they subscribe to online forums. Undoubtedly, technology has brought about profound changes at each level of education (Huff, 2011). The conventional ‘learning by doing’ theory of education has broadened to ‘doing and making to learn with technology.’ It has also spun the classroom setting from teacher-centered to student-centered as well as the overall structure of educational institutions (Jamil & Shah, 2011).

For sure, both the goal and the means for measuring quality teaching rely on promoting student learning (Schuck, Gordon, & Buchanan, 2008). Novel teaching strategies in higher education are those that incorporate an array of teaching methodologies, a combination of face-to-face and online methods, and a campus-wide receptiveness to effective teaching practices. But, moving beyond age-old teaching initiatives comes with both apprehensions and challenges (Kanuka, 2010). Although formal impersonal relationships are standard between university faculty and students, more personal relationships with professors have been cited by students as an important factor affecting their motivation and engagement in higher education (Yair, 2008). Allan, Clarke, and Jopling (2009) challenge teachers in higher education to “(re)conceptualize their role as a subject specialist-cum-teacher” (p. 369).

Goals and Objectives

Participants attending this session can expect to:

- Describe contemporary students in higher education;
- Define and identify differentiated instructional strategies;
- Participate in interactive differentiated instructional strategies;
- Develop and incorporate differentiated instructional strategies for use in their own classes.

Description

Participants attending this session will be (re) introduced to differentiated instructional strategies that are intended to meet the diverse needs of all students through a series of interactive activities. First, participants will describe the characteristics of contemporary students in higher education. Who are they? What are they really doing behind their laptops and iPads during your class? (and why?) Next, participants will define differentiated instruction. Is it really just a matter of jumping hoops? Finally, participants will take part in differentiated instructional strategies that engage, motivate, and challenge above and beyond a PowerPoint lecture. Participants will leave this session equipped with face-to-face and online instructional approaches to transform their class from “blah” to “ah ha!”

Discussion

Although differentiated instruction seems to be another buzzword in education, especially within elementary and secondary venues, it loses momentum in higher education. While teaching in secondary education, my mantra was that all students, regardless of age, gender, ethnicity, or socioeconomic status are capable of learning – perhaps not

at the same time or even on the same day. I found that some worked better in small groups while others were better left alone. Some preferred the analytical while others leaned towards the intuitive. When I left the classroom and became a doctoral student, I was quickly reminded that differentiated instruction is not necessarily a priority in higher education. Make no mistake, I did not expect to see professors doing cartwheels to serve content on a silver platter nor did I expect for them to hold my hand.

Simply put, it is doubtful that students will remember a PowerPoint lecture, but, they *will* remember challenging debates and discussions when they recall their college classroom experiences.

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It's Elementary My Dear Watson: Using Case Studies in Higher Education

Denise Dunzweiler, *Adventist International Institute of Advanced Studies*

Abstract: Dr. Watson, completely puzzled by how, with 'simple deduction', Holmes solved the most complicated case, questions: "Holmes, how on earth did you know how to solve this case?"

Sherlock Holmes, with a cunning smile and conspicuous confidence, replies: "It's elementary my dear Watson! In order to solve any case you must use your higher order thinking skills – knowledge, comprehension, application, analysis, synthesis, and evaluation. There you have it, Watson!"

Teaching in higher education is not something that Sherlock Holmes, nor Dr. Watson, have ever contemplated. However, many professors are perplexed by how to best engage students in a classroom setting. There is much we can learn from Holmes on how to teach students to be engaged in information that otherwise they may think of as trivial, or of little importance. There are many theories, and a great deal of research based pedagogy that is available to professors. However, often professors are challenged with finding and using new ways of presenting materials that best meet student needs. The focus of this brief presentation is to introduce what the literature reveals about using case studies across higher education disciplines. Case studies are designed so that students can identify with a situation and the actors described in it. Students are no longer spectators in a classroom. They imagine themselves as part of a case study because it offers a "dimension of realism so often lacking in the structured learning milieu" (Fisher, 1978, pg.259). This interactive session is primarily for those novice or tenured professors who want to be more skilled at actively engaging students in higher education using case studies.

Literature Review

Past research regarding higher education in the Business field demonstrates that one of the best ways to teach about Business is to use case studies. In fact the method was pioneered at the Harvard Business School, although the idea has proven easily adaptable to many academic disciplines (Christensen & Hansen, 1987). Additionally, in their article, and subsequent presentation, Bruner, Gup, Nunnally, & Pettit, Teaching with Cases to Graduate and Undergraduate Students, shared their "personal insights, methods, and tricks" at the 1997 International Financial Management Association meeting.

Currently, research suggests that one of the most successful methods of teaching students in nearly every discipline in higher education is to use case studies. An example of such is a UK booklet distributed in 2003, called Teaching Materials Using Case Studies. This excellent booklet describes the what, why, and how of using case studies, and specifically addresses teaching and learning in the Science and Engineering fields. Additionally, Gray and Smith (2007), in their introduction, declare "Using case studies as a problem-solving forum is a recent phenomenon in educational administration". Indeed, students in higher education need more problem solving techniques, experiences, and interpersonal relationship skills than ever before as they enter their respective fields of employment.

Goals and Objectives

During and after the presentation, individually and in small groups, participants will:

1. Recognize and describe case studies in their discipline area.
2. Compare student centered research and lecture based research to identify exemplary teaching pedagogy.
3. Examine and apply case study situations in their discipline area.
4. Analyze and deconstruct a specific case study within a small group.
5. Evaluate and develop a hypothesis of the case study within a small group.
6. Design and create a solution for the case study within a small group.

Description

In many higher education classrooms, research informs us that the educational experience has moved from primarily lecture based teaching, to student-centered activities. Case based learning is becoming more popular for developing student experiences that respond to the types of knowledge, skills and dispositions that are indicators of expected outcomes for students in higher education regardless of the discipline.

The focus of this brief presentation is to introduce what the literature reveals about using case studies across higher education disciplines. Case studies are designed so that students can identify with a situation and the actors described in it. Students are no longer spectators in a classroom. They imagine themselves as part of a case study because it offers a “dimension of realism so often lacking in the structured learning milieu” (Fisher, 1978, pg.259).

Additionally, with ideas derived from faculty development literature, participants will learn how to use case studies in the classroom. Case studies are not a quick fix. Good case studies require a great deal of time, as students and professors must be well prepared to be, at once, listeners, advocates, skeptics, and naysayers. Honan and Rule (2002), in their faculty preparation book, reminds us that, “good cases are ambiguous, full of conflict, and leave important issues unresolved” (p. 13).

Discussion

Faculty development websites, such as Florida State University, College of Medicine, includes, “Preparing and Using Cases for Teaching”. When you select “Using Cases in Teaching” it transfers you to the “Penn State Teaching and Learning with Technology” website. This site states, “The website was created for instructors interested in starting to incorporate case assignments into their curricula”.

There is currently a plethora of information and research ‘out there’ for a novice professor to begin using case studies. There are tenured professors in varied disciplines who are also novices when it comes to using case studies. (I am one!) This interactive session is primarily for those novice or tenured professors who want to be more skilled at actively engaging students in higher education using case studies. This will be an interactive session where the participants will be given a case study, and in small groups will develop a response to the case. My novice and personal experiences using case studies in graduate education will be imbedded throughout the presentation.

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**The Confluence of Pedagogy and Sustainability:
Possibilities and Impediments to Systemic Curricular Changes**

Ron Balthazor, *English, University of Georgia*, Tyra Byers, *Ecology and the Office of Sustainability, University of Georgia*, Adrienne Dorison, *Warnell School of Forestry and Natural Resources and the Office of Sustainability, University of Georgia*, Paul Quick, *Center for Teaching and Learning, University of Georgia*

Abstract: Sustainability is widely recognized as one of the greatest challenges facing students today. However no standard method exists for incorporating sustainability into the curriculum across disciplinary silos. The Oconee River Project at the University of Georgia works to incorporate sustainability into all levels of the curriculum. This practice session will explore good teaching practice as an integral part of sustainability in higher education. We will review the progress that has been made at UGA in incorporating sustainability in the curriculum, focusing particularly on evaluation, faculty development, institutional change, and campus communication and connection. At the very heart of sustainability is a cross disciplinary wholeness (particularly the confluence of the ecological, economic, and social spheres); such holistic thinking highlights some of the challenges involved in our current pedagogical practice, namely our discipline specific approach to higher education and standard lecture based class format. Part of the work of the Oconee River Project centers on creative and thoughtful course re-design and the integration of service learning that responds to sustainability in our community and requires students to become active learners through creative problem solving; we also know we need to think imaginatively about bridging various institutional and disciplinary divides to achieve our sustainability objectives.

Literature Review

A 1997 UNESCO report summarizes a key curricular component of sustainability: “A basic premise of education for sustainability is that just as there is a wholeness and interdependence to life in all its forms, so must there be a unity and wholeness to efforts to understand it and ensure its continuation.” “Sustainability Curriculum in Higher Education: A Call to Action” outlines part of the challenge we face as we work to imagine such a wholeness: “sustainability is inherently interdisciplinary and the organization of our institutions around departments and disciplines does not always support the kind of curriculum innovation that is needed” (p. 2). Tom Kelly in “Sustainability as an Organizing Principle for Higher Education” proposes a “sustainable learning community” as a model for “integrating sustainability into the fabric of an institution of higher learning to achieve the goal of cultivating a critical and creative global sustainable outlook” (Aber, J. D., Kelly, T., & Mallory, B. L., (2009), p. 2). Anthony Cortese suggests a university must “operate as a fully integrated community that models social and biological sustainability” and that “the content of learning must embrace interdisciplinary, systems thinking to address environmentally sustainable action.” In sum, much of the literature about sustainability in the curriculum points to creative pedagogical approaches for reaching the larger programmatic objectives of sustainability.

Goal and Objectives

Objectives of the Oconee River Project are to:

- Foster systems thinking through an understanding of social, economic and ecological systems including systemic limits and interdependence.
- Develop interdisciplinary knowledge and an understanding of the interconnectedness of sustainability challenges that transcends academic disciplines.
- Have students apply knowledge to place based, real world problems.
- Give students a local and global intercultural and intergenerational perspective that nurtures empathy, awareness, and respect
- Understand the complexity of relationships within and across communities.
- Encourage an informed, ethical, and scholarly sense of citizenship.

Goals for the practice session are to describe current practices and impediments and brainstorm additional opportunities.

Description of Project

Evaluation

Defining a baseline for the integration of sustainability in the curriculum, the University of Georgia 2009 Sustainability Report initiated an evaluation of sustainability in the curriculum on campus. Originally listing only sustainability related degree and certificate programs, the report has grown to include a comprehensive interdisciplinary list of sustainability courses across the University campus. Each year, as courses are developed and re-designed, we encourage faculty to integrate sustainability into their curriculum. Thus, the list of courses must be continually updated to ensure consistency and validity. Department heads from each discipline across campus are contacted on an annual basis to review the list of “sustainable” courses in their departments and update accordingly.

Faculty Development

To provide faculty with the tools for integrating sustainability into their courses, the Office of Sustainability initiated a faculty development workshop, modelled after the Piedmont Project at Emory University. The workshop, offered for the first time in May of 2012, provides strategies and examples for enhancing teaching aimed at preparing students to address the challenges of sustainability in their professional, civic, and personal lives regardless of discipline. Upon completion of the workshop, attendees submit a syllabus revision that reflects the integration of these strategies in their particular course or courses. The workshop includes discussions of sustainability and its role in the university curriculum and techniques for integrating these issues into classes. Specific topics include definitions of sustainability, how courses can engage sustainability, learning outcomes, interdisciplinary opportunities, and sustainability on campus. Nineteen faculty members participated in the first workshop from 17 different disciplines across UGA’s campus.

Institutional Change

The curriculum committee of Office of Sustainability is developing a Certificate in Sustainability for both graduate and undergraduate students. The Certificate is designed to prepare students for effective leadership in this area on campus and beyond. Encouraging students to extend the knowledge gained to their area of study, the certificate will complement students' existing degrees with a foundation in sustainability. The Certificate will require 18 semester hours including a foundation course in sustainability, a course in each of the three core areas of sustainability, namely social, economic, and ecological, an internship or project, and a capstone seminar. We hope to have the Certificate in place by the Fall of 2013.

Communication and Connection

The 2009 Sustainability Report at the University of Georgia identified a lack of communication between faculty as a roadblock to education. One of the goals of the Oconee River Project is to create opportunities for faculty to meet each other, exchange ideas, and foster cross disciplinary collaboration. Faculty breakfasts were initiated to foster this interaction. These breakfasts, which take place once a semester, include updates on the Oconee River Project, time for small group discussions, and opportunities for feedback on current projects. They are attended by faculty from many disciplines who have an opportunity to learn from one another and brainstorm implementation strategies.

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Global Service Trips as a Means to Cultural Competency 2.0 and Empathy Development

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John M. Dirkx, *Education Administration, College of Education*

Abstract: This qualitative study looks at the learning outcomes of medical students on medical service trips to developing countries. While the results show that most students acquired skills and knowledge in all areas of the medical core competencies, some salient comments from students display attitudes towards patients that point to opportunities for self examination, image and imagination work, and search for meaning of the self in relation to the “Other.”

Literature Review

Professionalism is part of an ethical code that upholds the physician-public relationship. The Accreditation Council for Graduate Medical Education (ACGME) defines professionalism as a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

Educational efforts at “multiculturalism” or “cultural competency” have largely approached teaching in terms of exposure to patients from cultures and backgrounds different from the majority of the students. Critics question the result of such activities as contributing further to discriminatory “hardening” of hearts toward the “Other” (Wear et al., 2012). While some of the intervention programs show promise, cynicism and moral erosion increase progressively as students enter medical school and progress through their learning requirements (Ibid, 2012). Cultural Competency 2.0 suggests that students need to reflect on themselves to access their subconscious mind. Learning to change to become more professional must be genuine, and not something taught to appear as though one is professional who says that “the problem of professionalism is a complex adaptive challenge requiring new learning.” (Lucey & Souba, 2010, p. 1018).

Methodology



This study examined medical students’ participatory experiences in service missions through a phenomenological study. We used the framework of transformative learning to explore attitude changes developed through experiences that elicit emotional responses. Generally, one is forced to reflect upon themselves as new experiences create dissonance between the old self into a new self. Thus to examine these experiences, we collected journals, met for mid-trip debriefings, conducted semi-structured interviews. We also created pre-and-post surveys to gauge students opinions about their abilities before and after their trip. The questions were based on the core competencies set by the ACGME.

Results

All elements of the 7 core competencies are apparent in the learning outcomes. Prominent among the experiences are comments about ethical and professionalism issues. There seems to be three types of approaches students take when going abroad educationally:

- 1) Students participate for professional competence (or academic tourism).
- 2) Students develop global awareness (or compares host culture to that of U.S.).
- 3) Students engage in an affective, emotional examination of themselves (which transforms or give opportunities for transformation).

Among the third group, medical missions seem to evoke critical incidents that set students off along a trajectory of deeper thinking about themselves and patients who normally are seen as the “Other.” Our findings match what other studies have shown: a) These experiences offer opportunities to foster critical thinking about humanitarianism and social service. b) This is because students who go because they care are usually shocked to see the extent of health disparities overseas. (see, March 2010 issue of *Virtual Mentor*).

Through interviews and journals, we also found that the students in group #3 seem to hold vivid images of patients they feel empathy toward, but at the same time hold feelings of helplessness. One student said he can still remember the smell of a patient's rotting feet which were infected and blistering with pus because the patient never received proper care. Other students described tearing up at seeing little children with no shoes or torn clothes. These seem to remain in students' conscious and unconscious mind for some time, creating opportunities to explore transformative learning from the perspective of "soul work" (Dirkx, 1997).

Discussion

Various suggestions have been made to help students cope with emotional elicitation such as sadness and powerlessness over the limited help available for those displaced from proper health care. We suggest that strong emotions evoke images and imaginations about patients that create a countertransference. The core of professional work is self knowledge and knowing who we are in relation to the "other" (Dirkx, 2008). We need to let students examine their images and imagination through soul work, rather than elicit coping mechanisms. The images are the messenger of the soul, with potential for soul to be manifest.

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Transformative Instruction Via Study Abroad: Students' Self-Efficacy and Global-Mindedness

Tracy M. Walker, Justina O. Osa and Badiyyah Waajid, *Virginia State University*

Abstract: Utilizing a mixed methods approach, this study sought to gain a better understanding of the effects of participation in a short-term education abroad experience on self-efficacy and global mindedness while students complete the research project requirement of the research course in summer of 2012. A small sample of graduate students participated in pre- and post- abroad interviews and completed the Hett Global-Mindedness Scale. The researchers determined that, as a result of their participation in the short-term study abroad experience, the graduate students did demonstrate gains in self-efficacy as found in the semi-structured personal interview transcripts. In addition, participants demonstrated gains in their global-mindedness as demonstrated by the mean gains on the Hett Global-Mindedness Scale. Findings of the study will be shared and discussed as well as suggestions from the participants as to how to increase participation in education abroad experiences.

Literature Review

"It will change your life. You'll come back a new person." For years, the benefits of study abroad have been described in these words, (Dwyer and Peters, 2004). Higher education leaders and faculty are not only concerned with intellectual development and learning but also moral, social, physical, and spiritual development of students, including intercultural competency or global learning and development (American Council on Education, 2008; Association of American Colleges & Universities, 2007; Musil, 2007). Education abroad has become an increasingly important educational contribution to global learning and development, intercultural competence, intercultural maturity, and intercultural sensitivity of students. Education abroad has considerable potential in providing an environment that results in value added to student global learning and development. Evidence exists that education abroad is a powerful influence on student's attitudes, intercultural skills, and learning within a discipline. Self-efficacy, a person's belief in his/her ability to succeed in a particular situation, can also contribute towards a student's feelings regarding their education abroad experience. By participating in a short-term education abroad program, graduate students may also increase their global-mindedness which is one of the 21st century skills.

Research acknowledges the impact of the environment on an individual's growth and development. Individuals, for example, within the same environment may respond differently to that environment. Similarly, different environments may create similar outcomes for different individuals. Bronfenbrenner's (1979) influential and well-accepted ecological model of human development examines a child's development within the context of a system of relationships that forms a child's own personal complex environment. Some envision the model as environmental systems-layers beginning with the child as its' own biological and primary environmental layer extending outward to the immediate family, community, and finally the distant or larger environmental layers. Interactions between the systems layers are transactional--two way-- in nature with change or conflict in one layer of the environment resulting in a change of some type in the child. Subsequently, to understand a child's growth in any one of the developmental domains---cognitive, physical, emotional, social--- one must examine not only the child but aspects of the child's immediate and distant environment as well as interactions between same. The U.S. Department of Labor's SCANS report (1991) identifies acquiring and using information, identifying and organizing resources, working with others, interpreting information, and understanding complex interrelationships as essential competencies and skills. Adult learners themselves view learning to think as autonomous, responsible persons as an important educational objective. This view became evident in the delivery method which the faculty members adopted to teach the research course in the summer of 2012.

Methodology

Sample. The participants in this non-experimental mixed methods study were six graduate students participating in a short-term study abroad in July 2012. The participants represented various graduate programs across campus: School Counseling, Special Education, Mass Communications, Clinical Psychology and Organizational Leadership. *Design.* This study utilized a triangulation mixed methods design in which the qualitative and quantitative techniques were conducted simultaneously. Qualitative data collected included pre- and post-abroad semi-structured personal interviews with participants. Quantitative data was collected from a pre- and post-abroad administration of

the Hett Global-Mindedness Scale via Qualtrics, an online survey administration system. The Hett Global-Mindedness Scale is a 30-item Likert-type scale representing five theoretical dimensions: responsibility, cultural pluralism, efficacy, global centrism and interconnectedness.

Data Analysis and Results

A review of the transcripts of the first-person narratives was conducted in order to develop one or more themes among participants' responses to find if any changes related to self-efficacy could be identified. Word clouds were developed to conduct pre-analyses of the transcripts. Positive changes in self-efficacy were found in the interview responses of participants from pre- to post-interviews. One example of changes included participants' responses to question 2: What are the words you would use to describe your feelings when you think about your upcoming trip? (pre-question) and What words would you now use to describe your experience during the study abroad trip? (post-question). At first, participants used descriptors indicating 'excitement', 'curiosity', 'nervous' and 'curious' to describe their feelings about their upcoming experience. However, after the study abroad experience, the participants used descriptors such as 'impact', 'energy', 'successes' and 'real'. Results of the Hett Global-Mindedness Scale were analyzed utilizing the Wilcoxon signed rank test to determine if there were any significant changes from the pre-abroad survey to post-abroad survey results. Of the 30 items, only three presented significant findings: Item 1 ($p = .046$), 8 ($p = .018$) and 20 ($p = .046$). Item 1 was aligned to cultural pluralism and asked respondents the extent to which they agreed with the following statement: I generally find it stimulating to spend an evening talking with people from another culture. Item 8 was aligned to cultural pluralism as well and stated "Americans can learn something of value from all different cultures." Lastly, Item 20 was aligned to efficacy and stated "I think my behavior can impact people from other countries." The Hett Global-Mindedness Scale results are also summed by individuals to provide an overall rating, of which 150 points is the highest. One participant demonstrated a loss of 6 points from 109 points on the pre-survey to 103 points on the post-survey. The five other participants all had positive gains from the pre-survey to post-survey, demonstrating gains from as little as 3 points to as high as 30 points. The mean for all participants on the pre-survey was 102.8, while the mean for the post-survey was 112. Additional findings will be shared at the presentation

Discussion/Conclusion

The researchers determined that, as a result of their participation in the short-term study abroad experience, the graduate students did demonstrate gains in self-efficacy as found in the semi-structured personal interview transcripts. In addition, participants demonstrated gains in their global-mindedness as demonstrated by the mean gains on the Hett Global-Mindedness Scale. The researchers hope to add to this data by recruiting participants from the short-term study abroad group in July 2013 as well as working with the Office of International Education to administer the Hett Global-Mindedness Scale to additional students.

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Friday

February 8, 2013

**Presentation
Sessions**

<http://www.cider.vt.edu/conference/>

Friday

February 8, 2013

Session 12

9:00-9:50 AM

Presentations:

It Doesn't Take a Village... It Takes a Professional Learning Network!
Schirr, G., and Schirr, L.

*Does Lecturing Put You to Sleep: How Problem-based Learning
Can Awaken Your Classroom*
Newstetter, W., Hunter, D., Paretti, M., and Matusovich, H.

Critical and Creative Thinking by Design
Finn, T., Baum, L., and Newbill, P.

Peeling the Onion: Diversity and Inclusion for All Students in All Classrooms
Tilley-Lubbs, G., and Popova, D.

*"Expedition Leadership" – Faculty Support and Academic Leadership Development
at Virginia Tech*
Hogan, A., and Massey, J. D., Jr.

Flipped Faculty Development: Applying Effective Classroom Strategies for Professional Learning
Kelly, K.

A Dynamic, Interactive Approach to Learning Mathematics and Engineering
Beaulieu, J., and Vick, B.

A Case Study of a Training Program for Teachers of Mathematics
Ramírez, M.

<http://www.cider.vt.edu/conference/>

It Doesn't Take a Village...It Takes a Personal Learning Network

Gary R. Schirr, *Marketing, Radford University*

Laurel E. Schirr, *Marketing, Virginia Tech*

Abstract: Accelerated change and growth of information make staying current in one's field very challenging. This practice session provides some new and interesting ways to do this by using a personal learning network. A PLN will also aid teaching, research and be a lifelong learning tool. PLNs can be initiated and nourished and include incredibly diverse members through social media platforms. Teachers and researchers can reach out to persons with specialized skills and knowledge all over the world. This session discusses the authors' experiences in developing, nurturing and utilizing a PLN for lifetime learning and teaching support. The session provides tips, from social media platform selection to suggested social activity, for academics interested in enhanced and utilizing their personal learning networks.

Literature Review

Lifetime learning, a part of the role of an academic in both teaching and research roles, advances the economy and culture of a community (Whyte 1989). Personal learning networks are a key part of the lifetime learning: "Personal learning networks ("PLN") are not new. We have long relied on...colleagues and acquaintances to supplement our knowledge..." (Warlick 2009, p. 13). "Without sharing there is no education" (Wiley 2008). Richardson and Mancabelli (2011) argue that it is vital that every educator use social media to develop a PLN in order to advance their own lifelong learning as well as to understand the virtual learning environments of their students.

Personal learning networks are a key component of personal learning environments, "manifestation[s] of a learner's informal learning processes via the Web" (Martindale and Dowdy 2010, p. 182). Learners have always depended on peer networks; social networking allows one to effectively approximate online the traditional learning opportunities of study groups, brown bag lunches, and communities of practice (Martindale and Dowdy 2010). Online PLNs are vital to sustained, long-term learning: traditional offline PLNs die when people change jobs or courses; PLNs on social media are not dependent on location or current tasks (Couros 2010).

A PLN effectively collaborates with personal learning and innovation. Literature on online collaboration suggests that voluntary contributors to innovation are motivated by (1) the satisfaction from creation, (2) the honing of their personal skills, and (3) the recognition within their collaborative community (Lakhani 2003; Harhoff, Henkel, et al. 2003; von Hippel 2005) "Learners become amplifiers as they engage in reflective and knowledge-building activities, connect and reconnect what they learn, add value to existing knowledge and ideas, and then re-issue them back into the network to be captured by others through their PLNs. Working your PLN involves a great responsibility on your part because you are almost certainly a part of someone else's network." (Warlick 2009, p. 16; Schirr 2013)

Goals and Objectives for the Session

The goals of this practice session are to inspire the use of social media to create, nurture and utilize a personal learning network for professional growth and to improve teaching efficacy. By the end of this session, the participants will be able to:

1. Identify the uses of a personal learning network
2. Select appropriate social media platforms for their particular field of study
3. Know the amount of time and effort that will be involved to maintain the PLN

Description of PLN Use in Pedagogy: Two Examples

PLNs can assist a research program: one of the authors currently is exploring joint research on innovation and social media with two members of a PLN that the author has never met outside of social media. Both authors credit blog posts, daily article links on twitter, LinkedIn groups and Facebook, and social media discussions as aids to staying current in their fields. The examples for this session are teaching examples: the help of a PLN to a professor preparing to teach a course for the first times; and the role of a PLN as a professor creating a new course.

When the second author was assigned to teach Advertising for the first time she reached out to her PLN for advertising professionals who were willing to speak to the class via Skype. She also searched the internet to find individuals to add to her network. Through discussions with these people, the instructor gained more knowledge of the field and the curriculum became more timely.

When the first author received a grant to create a new course in social media marketing, there were no textbooks or online syllabi. He used his PLN to effectively crowd-source the syllabus and design of the new course (Schirr 2013; Schirr 2012). The session will cover the outcomes and insights from these two PLN collaborations and the lessons for others who seek to collaborate with PLNs.

Richardson and Mancabelli (2011) suggest that an educator begin developing an online PLN with 5 social media tools: (1) Twitter, (2) Facebook, (3) a personal blog, (4) Google Reader (rss), and (5) a “curation” site such as Reddit or Digg. One author primarily uses Twitter, a blog, and LinkedIn for his PLN, while the other author employs LinkedIn and Facebook. The benefits of these social media platforms and others such as Pinterest, Slideshare, Youtube and Instagram will be discussed in the session, along with the time requirements.

Discussion

Both presenters are enthusiastic in their use of social media as a pedagogical tool. Lively examples will be given and a game will be played called, “Social Media PLN Challenge.” In which participants write down on a card their field of study or research or their reason not to use a PLN. One volunteer will select a card at random, read it and the entire group (our own PLN!) will strive to solve the challenge.

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Does Lecturing Put You to Sleep: How Problem-Based Learning Can Awaken Your Classroom

Wendy Newstetter, *Biomedical Engineering, Georgia Tech*
Deirdre Hunter, Marie Paretti and Holly Matusovich, *Engineering Education, Virginia Tech*

Abstract: Problem-based learning is a learner-centered pedagogy designed to increase student agency in the learning process – which leads to a deeper understanding of their knowledge, longer retention of the knowledge and increased ability to transfer knowledge to other problems or disciplines. In addition students gain valuable skills in problem-solving, teamwork and communication. In this session we will demonstrate how problem-based learning (PBL) can be used in your classroom. One challenge to implementing PBL is the new skills and techniques required of the instructor that differ markedly from traditional content-delivery modes. Though these roles are often not as natural for faculty, we will suggest some strategies for enacting these new roles. Participants will have the opportunity to experience a PBL learning environment as we believe the best way to learn is by doing.

Literature Review

Problem-based learning (PBL) as a pedagogy dates to the 1970's and has origins in medical education (Barrows, 1996). Today, PBL can be found in many disciplines, such as medicine, nursing, education, science, reading and engineering among others (Savin-Baden, 2007). Many studies have examined the learning outcomes for PBL; a meta-analysis of these studies show that students achieve learning outcomes as well as or better than students in traditional lectures (Strobel & van Barneveld 2009). In addition to the learning outcomes, PBL has been shown to increase student motivation (Matusovich, Paretti, Jones, & Brown, 2012) and students' professional skills such as team-work, communication and life-long learning (Hmelo-Silver, 2004). PBL is markedly different from traditional lecture methods and thus lack of faculty training and support can be a barrier to implementation. A significant challenge for faculty in adopting this different pedagogy is transitioning to a new role in the classroom: a facilitator not a teacher. The facilitator in a PBL classroom supports what is referred to as a *cognitive apprenticeship* (Collins et al, 1989). His/her role is to make explicit the cognitive strategies that they as experts would employ in addressing the problem through modeling behaviors. This is not standing at the board and solving problems, rather it is through, coaching and mentoring the students through continual questioning. We are currently working on an instructional model for PBL as a guide to effectively implement this pedagogy; this model identifies facilitator roles and how they are enacted in the classroom (Hunter, Matusovich, & Paretti, 2012).

Goals and Objectives

In this session, participants will have the opportunity to observe paired videos of traditional and PBL classrooms to evaluate the activities, the moves, and the actions of the instructor and facilitator. Participants will use observational protocols individually to evaluate the clips and then share their observations in pairs. A designer of PBL classrooms with eight years of in class experience will then share her observations of the differences (Newstetter 2005, 2006). The second part of the session participants will use the PBL instructional model to identify facilitator roles that they can use in their classrooms. This will be done through role-playing with the presenters and session participants. The overall goal is to clarify how facilitation differs from instruction by having participants observe, evaluate and apply various facilitator roles. Our desire is that this session would inspire participants to implement changes in their classrooms and provide them with the skills to implement change.

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Critical and Creative Thinking by Design

Teri Finn, Liesl Baum, and Phyllis Newbill, *IDEAStudio, Virginia Tech*

Abstract: Design is a skill that is relevant to students in all disciplines. Those who design identify problems in their immediate worlds and devise meaningful, practical solutions to those problems. They utilize the skills of critical and creative thinking that are increasingly valued outside of academic environments. Designers are collaborators, communicators, and critical thinkers. Designers are more than consumers of knowledge and instead develop as creators, makers, and doers. During this session, participants will participate in a mini-design challenge and explore how to implement design-based learning in their own classrooms.

Literature Review

The increasing complexity and connectedness of today's world has led to a dynamic shift in the skills and knowledge deemed relevant for students to master in their academic careers. We see evidence of this from a wide range of sources calling for a new skill set in students. The National Educational Technology Standards for Students (NETS-S) emphasize creativity and innovation, communication and collaboration, research and information fluency, and critical thinking, problem solving, and decision making as the skills needed in our next generation of graduates (ISTE, 2011). McArthur & Sachs (2009) urged higher-education institutions to recognize that finding solutions to the challenging issues of our time requires us to focus not on single-discipline studies but rather knowledge across a range of disciplines. Tony Wagner, an Innovation Education Fellow at the Technology and Entrepreneurship Center at Harvard, identified five differences between schools creating innovators and schools that are not. Those differences are: (1) collaboration versus individual achievement, (2) multidisciplinary learning versus specialization, (3) trial and error versus risk avoidance, (4) creating versus consuming, and (5) intrinsic versus extrinsic motivation (Wagner, 2012). Design-based learning environments offer educators the opportunity to foster the skills of a new generation in the innovative settings characterized by Wagner. When students design, they *collaborate to create* solutions to problems. They discover the need for and seek out knowledge *across disciplines*. They take *risks* to devise and test their unique solutions, and they are *motivated* by solving problems situated in the real world. Through each of the phases of design, they practice the skills of critical and creative thinking outlined in the NETS-S standards above.

Goals and Objectives for the Practice Session

As a result of attending this session, participants will be able to:

- Identify four key aspects of critical and creative thinking
- Name the phases of design
- Identify the types of critical and creative thinking used in each phase of design how design environments foster critical and creative thinking
- Describe how design environments offer the five characteristics of environments that create innovators (Wagner)
- Identify how they could implement design within one of their own courses

Description of the Practice

Participants in this session will first engage in a discussion about some of the specific skills involved in each of the aspects of critical and creative thinking: Idea Generation, Reflective Judgment, Self-Regulation, and Attitudes and Dispositions. Armed with an overview of this information, we will next break into groups and work through a mini-design challenge to gain an overview of the phases of design and consider how each phase engages learners in the skills of critical and creative thinking. Participants will be explicitly divided into diverse groups with representation from different areas of interest for this challenge. They will then investigate examples of designed things to discover its relevance in fields not typically thought of as design-based fields. Upon completion of these activities, we will brainstorm as a group ways to incorporate such a learning model into a range of classroom settings.

Discussion

In the 2011-2012 academic year, the presenters implemented a design-based learning environment with a group of students from diverse departments around campus. Students had backgrounds in industrial design, computer programming, curriculum and instruction, instructional design and technology, arts education, and engineering. We first worked with the students to help them value and utilize some of the skills of critical and creative thinking. Armed with knowledge of these skills, we identified a broad design challenge for students: *Use technology in creative ways to develop a product of the arts that can be used to teach science.* Students worked in groups to find specific problems within this design challenge and then design and develop meaningful, practical solutions to their specific problems. During the second semester, new students joined some of the returning students and fully developed one of the first semester ideas into a final product, *Change Over Time*. Student reflections provide evidence of the value they found in the course. For example, one student learned that “one of the keys here is being open to each other and open to learning from each other and to appreciate each other’s strengths.” Another student noted, “sometimes taking risks requires you to be a little uncomfortable at first, but I think in hindsight I think it was good that I had become comfortable with being uncomfortable in certain situations.” A final student observed, “thinking outside my box... has been something that I’ve definitely had to do this semester – get out of my education box, get out of my comfort zone. I can finally say I’m peeking out of it and I’m OK with that.”

Through the proposed practice session above, we hope to encourage faculty members to take risks of their own and try implementing design-based learning environments in their classrooms. We offer strategies for implementation and want to share our lessons learned with others who support the vision of building classroom environments that create innovators.

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Peeling the Onion: Diversity and Inclusion for All Students in All Classrooms

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Abstract: The presentation addresses the various facets of diversity with special emphasis on the participants engaging in activities that allow them to recognize and understand their own “invisible” diversity. The basic premise of the presentation focuses on developing an awareness of one’s own cultural perspectives in order to better understand the multiple diverse cultural perspectives encountered in the classroom (Banks & Banks, 2013). The session begins with an exercise that guides participants through constructing definitions and descriptions of diversity in terms of nationality, race/ethnicity, religion, exceptionality/non-exceptionality, social class, age, and gender. Working in small groups, participants will define and describe their own diversity, both within the macroculture of the United States and the microcultures of their own backgrounds. Following an interactive presentation regarding common misconceptions about diverse students, participants will use case studies to examine manifestations of both invisible and visible diversity within classrooms. This activity will allow participants to discuss how the cultural differences and similarities all students bring to the educational experience can enhance the learning environment for all class members. Lastly, participants will work in groups to design their own plan of action for developing practices that demonstrate inclusive excellence in their own classrooms.

Literature Review

American university classrooms have become increasingly diverse based on demographic changes and increasing awareness of the multiple facets that shape cultural perspective. Conversely, the faculty who teach these courses has remained fairly consistent with diversity having little representation among those who deliver the courses.

Between 1980 and 2008, the White population of the United States declined from 80% to about 66%, and as of 2007, 14% of the general population was born outside the country (Aud, Fox, & Kemal-Remani, 2010). This student diversity however, is not reflected in teachers and administrators as approximately 85% of K-12 teachers are White (Feistritzer, Griffin & Linnajarvi, 2011). [Consequently] . . . teachers and students . . . inhabit different worlds, without full comprehension of or appreciation for each other’s lived experiences and realities (Gay, 2011; Sleeter, 2001) . . . which in turn presents its own challenges in the classroom.

. . . . Teachers may not yet have had direct contact with diverse persons and may potentially bring distorted perceptions and opinions into the classroom, which may in turn affect pedagogical efficacy, i.e. their ability to effectively convey lesson content to every student in the class. Teachers may view *their* life experiences as social norms, thus applying deficit notions to students from marginalized groups (Ford & Quinn, 2010; Sharma, 2007; Silverman, 2010), and as Ladson-Billings (1995) notes, the potential for cultural mismatches, real or perceived, may impede student learning and real-world applications of lesson content, potentially bringing distorted perceptions and opinions into the classroom, which may in turn affect pedagogical efficacy, i.e. their ability to effectively convey lesson content to every student in the class (Popova, unpublished manuscript).

Even though many instructors may not have had personal experiences with diversity, they may still have good intentions regarding the diverse students in their classrooms. Consequently, they may enact “*color-blind* or *culture-blind*” ideologies, unprepared to confront the influence of history, politics, and economics on their students and classrooms (Liggett & Finley, 2009 in Popova, unpublished manuscript). By so doing, they negate the challenges their diverse students may face on a daily basis and the way these challenges affect their learning experiences in the classroom. Even though many institutions have adopted models of inclusive excellence (Williams, Berge, & McClendon, 2005) at the administrative level, faculty continue to struggle with ways to create classrooms that in practice embrace inclusive excellence.

Objectives

Upon completion of the session, participants will be able to:

- Define and describe various aspects of diversity;
- Identify reasons regarding the importance of recognizing and appreciating diversity in the classroom;
- Develop strategies for implementing the movement from “doing diversity” to enacting diversity in the classroom setting; and
- Apply practices for inclusive excellence in the classroom.

Description

The presentation addresses the various facets of diversity with special emphasis on the participants engaging in activities that allow them to recognize and understand their own “invisible” diversity. The basic premise of the presentation focuses on developing an awareness of one’s own cultural perspective in order to better understand the multiple diverse cultural perspectives encountered in the classroom (Banks & Banks, 2013). The session begins with an exercise that guides participants through constructing definitions and descriptions of diversity in terms of nationality, race/ethnicity, religion, exceptionality/non-exceptionality, social class, age, and gender. Working in small groups, participants will define and describe their own diversity, both within the macroculture of the United States and the microcultures of their own backgrounds. Following an interactive presentation regarding common misconceptions about diverse students, participants will use case studies to examine manifestations of both invisible and visible diversity within classrooms. This activity will allow participants to discuss how the cultural differences and similarities all students bring to the educational experience enhance the learning environment for all class members. Lastly, participants will work in groups to design their own plan of action for developing practices that demonstrate inclusive excellence in their own classrooms.

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“Expedition Leadership” - Faculty Support and Academic Leadership Development at Virginia Tech

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John D. Massey, Jr., *University Organizational and Professional Development, Virginia Tech*

Abstract: Recent and near-future demographic, economic, and cultural changes require that institutions of higher education focus on establishing effective programs and practices that help prepare both current teaching and research faculty to meet these changing demands while also having in place critical faculty development and support resources that facilitate the success of new faculty and the academic enterprise at large. Virginia Tech’s ongoing commitment to supporting professional development and faculty career success is inspired by our motto *Ut Prosim* (That I May Serve). To that end, the university supports numerous organizations in offering a comprehensive variety of professional development opportunities. University Organizational and Professional Development, one of the largest on-campus providers of professional development programs, offers both cohort-based programs in the areas of management, leadership, and administrative services and also offers over 100 open-registration programs on topics that include leading change, managing conflict, team building, supervisory skills, and desktop software training. In addition, the Office of the Provost sponsors key faculty development programs focused on academic leadership development and faculty career advancement.

Discussion

Academic Leadership Development - Training and development workshops are facilitated throughout the year for those in or pursuing positions of academic leadership. Sessions are designed to provide foundational knowledge and build skills relevant to those moving into leadership roles, including topics related to managing university resources, legal issues, personnel support and performance management, inclusive excellence, and leadership development.

Department Heads Council - The Department Heads Council is a self-organized group focused on developing a better collective future for Virginia Tech's academic departments and their leaders.

Goals and Objectives for the Session

Participant engagement is both encouraged and expected throughout this overview and discussion of faculty leadership and professional development best practices at Virginia Tech. As a result of attending this session, participants will have gained insight they can utilize to:

- Begin assessing the need for faculty leadership and professional development programs within their respective college and/or academic department.
- Identify opportunities to contribute to the enhancement and improvement of their institution’s existing faculty leadership and professional development programs and resources.
- Identify opportunities to advance their own academic careers through proactive participation in faculty governance structures, mentoring relationships, and education/training programs offered by their academic institution.

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Flipped Faculty Development: Applying Effective Classroom Strategies for Professional Learning

Kevin Kelly, *Wiley Learning Institute*

In the last year or two, higher education faculty have been flipping classrooms around the world--recording their own lectures, using materials from sources like MOOCs or MERLOT, and engaging students in new ways. Have you considered using these techniques for faculty development? Participants in this session will a) share their own strategies for flipping faculty development, b) gain new ideas about finding and/or creating resources for instructors about teaching and learning, c) discuss effective tools and technologies to use, d) brainstorm activities that encourage instructors to put what they learn into practice, and much more.

A Dynamic, Interactive Approach to Learning Engineering and Mathematics

Jason Ross Beaulieu & Brian Vick, *Mechanical Engineering Department, Virginia Tech*

Abstract: The major objective of this study is the development of dynamic, interactive applications aimed at complementing traditional engineering and science coursework, laboratory exercises, and research. A number of applications have been carefully designed to meet cognitive demands as well as to provide easy-to-use interactivity. Recent technology introduced by Wolfram Mathematica called CDF (Computable Document Format) provides a tool that gives ideas a communication pipeline in which technical content can be presented in an interactive format. This new and exciting technology has the potential to help students enhance depth and quality of understanding as well as provide teachers and researchers with methods to convey concepts at all levels. This approach in helping students and researchers with teaching and understanding traditionally difficult concepts in science and engineering relies on the ability to use dynamic, interactive learning modules anywhere at any time. Demonstrations were developed for a variety of different subjects covering a wide range of topics and fields of study. The CDF technology provides a powerful edge in connecting with all types of learners through interactive learning.

Literature Review

Numerous studies have reported that students learn better from text and pictures than from text alone [Rasch & Shnotz, 2009]. Also, non-interactive dynamic displays such as animations and movies can enhance learning. However, once a video advances beyond a frame, that information is no longer available, resulting in heavy demands on memory. It is well known that memory has a limited capacity when dealing with new information. In fact, without rehearsal, information in working memory is lost within 20 seconds [Peterson & Peterson, 1959]. Therefore, animations and movies alone may not be beneficial to the learner. On the other hand, static displays allow the viewer to re-inspect various parts of the display as frequently as needed to gain a comfortable understanding. Research has concluded that displaying the corresponding states of a concept simultaneously with static pictures would provide a much better understanding for technical concepts [Schnotz & Lowe, 2008].

Combining both interactive and dynamic displays allows the user to control speed based on their own comprehension. This enables the user to adapt to their own personal constraints on perceptual and cognitive processing by slowing down or speeding up the rate of the display. Also, this allows the user to test various hypotheses about the processes by defining parameters of the display accordingly. This puts fewer demands on memory and more focus on understanding. Furthermore, research has concluded that when interacting with dynamic displays, viewers are much more active in the learning process [Hegarty, 2004]. The current paper is based on the recent work by Beaulieu [2012] in which a set of dynamic, interactive modules spanning a variety of mathematical and engineering topics was created for classroom and research use.

Motivation and Objectives

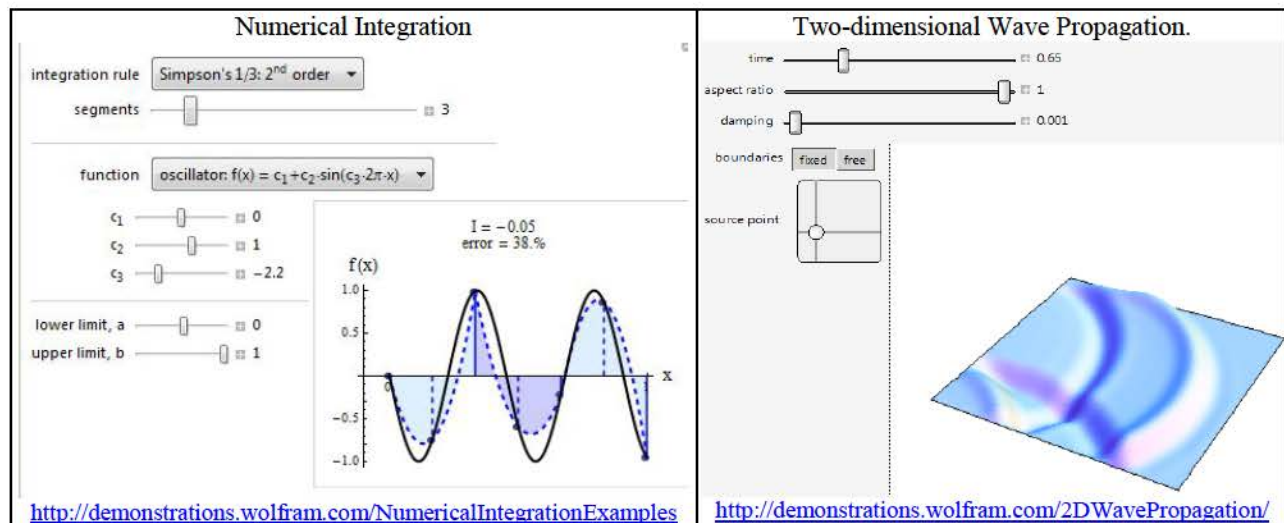
The world of scientific computation and visualization has changed drastically. Of particular significance is the scientific software package Mathematica from Wolfram Research. It has unparalleled capability for symbolic manipulation and animated graphics. Sharing these animations with non-Mathematica users has always been a road block. However a new technology called CDF (Computational Document Format) was released by Wolfram in the spring of 2011. This technology allows anyone to interact with Mathematica animations and to create dynamic, interactive books, reports, or applications. These documents can be distributed as web objects or desktop applications. All that is needed is an internet connection to download and install the free CDF software. This technology is truly exciting in that it makes possible the creation of dynamic, interactive tools. The potential significance for education and research is immense.

The main objective of this project is the development of applications that are both dynamic and interactive using Mathematica's CDF technology. The specific objectives are to: (1) Create applications for use in a research environment, (2) Develop applications for use in traditional engineering and science courses, (3) Develop virtual

labs to compliment traditional laboratory courses, (4) Publish applications on open websites, particularly on the Wolfram Demonstration Site.

Dynamic, Interactive Learning through Mathematica Animations

In the following graphic a sample of two different dynamic, interactive modules created by Beaulieu [2012] are shown. These animations are published on the Wolfram Demonstration Site and can be explored directly from the indicated links.



Conclusions

The world of visual learning has the potential to increase learning and understanding in a vast range of engineering and mathematical subjects. Future implications show that dynamic, interactive learning modules have the potential to accelerate research development and to provide deeper understanding of classroom material. Furthermore, this new and exciting technology has the ability to adapt to any learning environment. Fields of study ranging from business to the sciences to fine arts could all benefit from interactive applications. Already there are thousands of interactive learning modules located of Wolfram's Demonstration Site within a vast range of subjects.

The potential for future work is limitless. The vast range of topics and ideas could take a lifetime to develop. Mathematica's CDF technology has the potential to accelerate growth in modern educational systems. The ability to quickly use and learn from dynamic, interactive applications provides depth and quality of understanding as well as a feel and intuition for physical processes. In the end, using dynamic, interactive applications can offer something for all students—from beginners to world experts—and the dream of visualization, deep insight, and true understanding can become a reality.

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A Case Study of a Training Program for Teachers of Mathematics

María Isabel Ramírez, *Center for Research and Development in Education (CIFE) at Universidad de Los Andes, Bogotá, Colombia.*

Abstract: This document is part of a case study for the professional contexts axis of the Bachelor's program in Elementary Education with emphasis on Mathematics. This program was established in 1999, in order to train mathematics teachers to respond for the high demands of the Colombian context in this field. Today, more than 243 professionals have been graduated from this program and it is considered a curricular innovation in Colombia.

The goal of qualitative study was to better understand the educative experience denominated 'professional contexts axis'. This experience is the articulating factor on which the entire curriculum actually depends. In this sense, the skills, abilities and knowledge acquired by students in other axis' program make sense for them in the professional contexts axis. Doing so, I used as data collection techniques interviews and surveys. The main sources of information were students, teachers, administrative staff, graduated and employers. The results show how important this experience is and how valuable it is as a pedagogical educative experience. In conclusion, these results are relevant in the comprehensive training for teachers of mathematics in High Education.

Background and Literature Review

The Bachelor's program in Elementary Education with emphasis on Mathematics was designed to address the difficulties presented by the training of mathematics teachers in Colombia. [1] The separation of the three components in the formation of a professor of mathematics, pedagogy and humanities, [2] the belief that to teach math it is enough to know math, and [3] to recognize that school mathematics is different from mathematics (Vergnaud, 1995; Chevallard, 1995 Cited in Romero, 2002).

Lurduy (2009) presents The Bachelor's program in Elementary Education with emphasis on Mathematics as a training program for teachers of mathematics that has taken one perspective from the pedagogy as a reconstructive discipline, critical and complex. Also, it was based in a systemic perspective of the didactics of mathematics and mathematics education as a scientific discipline. It means, it is conceived as a research project from a viewpoint supported interdisciplinary research conceptions and beliefs from the teacher and math teacher, curriculum innovations and curriculum as a research project, research and conceptualization in teacher training mathematics, the construction of professional knowledge of mathematics teachers, reflective professor and research professor, and problem solving as teaching methodology. Since the program's inception in 2000, the curriculum is divided into four axis of training: school mathematics, advanced mathematical thinking, practice in the classroom and professional contexts, which is the focus of this research study.

However, research regarding the training of mathematics teachers in last generation programs (2000-2009) is recent. The information like research, articles in recognized journals, academic production plus the skills developed and learning acquired in these programs is nonexistent (Lurduy, 2009). Also there are few evaluation programs concerning specific aspects such as the role of the pedagogy, social and human in the training of teachers of mathematics. In this respect Wood (2008) relates the specific aspects of the training of mathematics teachers as issues that deserve further investigation. To bridge the gap in research its study was designed to take a closer look at: [1] perspective with stakeholders on how to address the teaching and learning of pedagogy in the program, and [2] the contribution of this axis to the formation of mathematics teachers in Colombia.

Methodology

The case study was conducted at public university in Bogotá, Colombia. A total of 293 students (75%), the coordinator of program, 10 teachers, 37 graduates and 12 employers made the stakeholders groups. They gave their perceptions from their experiences about the professional contexts axis and they talked about how this experience has affected their practice or its career path. The approach to the stakeholders was made through surveys and/or semi-structured interviews during twelve weeks of the second semester of 2011.

Data Analysis and Results

The data was analyzed using qualitative techniques established by Robert Stake (2010). This qualitative design assisted in defining codes and developing a way perspective on the perceptions of the stakeholders.

The stakeholders identify some important factors of axis. They agreed that the execution of the program corresponds to a solid design that is evident in [1] the theoretical basis of complex thinking, [2] the value added, offering teacher training: the knowledge across of mathematics, [3] which encourages reflection on the student-teacher: *the complexity of human beings and the reality of the profession "math teacher"*. Consequently, stakeholders consider that the professional contexts axis brings from three large fields to mathematics teacher training:

Pedagogical training. By transforming traditional teaching and encyclopedic pedagogy, this axis linking the whole humanistic component to teacher training.

Development of five skills. (a) Critical thinking, to give items for students to have understanding about education in relation to the condition of the world. (b) Communicative skills, since the professional context axis maintains a high level of requirement from all activities that promotes processes regarding reading, oral and writing skills. (c) Teamwork as one of the skills that today's professional must manage. (d) The ability to solve problems. Since the professional contexts axis give analysis elements that allow student teachers to think and solve problems of their profession. (e) It contributes to develop research skills in their practices.

Teacher's Projection. The professional contexts axis encourages students to make teaching their option of life. It works for the construction and establishment of the identity of the teacher. It invites students to think themselves as future teachers of mathematics and to be aware of the implications of this for their professional life. Finally, it remarks the social, political, ethical and moral responsibilities they will have with their future students' lives.

Discussion / Conclusion

This work contributes to close the gap between research on mathematics teacher training, both in the national and international field (Wood, 2008). This identifies the important elements of a successful practice of pedagogy teaching in a training program for mathematics teachers, who have accepted the challenge of innovation in higher education. It is presented a discussion on some aspects that are generally not considered relevant in higher education curriculum related to the training of mathematics teachers.

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Friday

February 8, 2013

Session 13

10:10-11:00 AM

Presentations:

21st-Century Digital Writing: Peer Review, Faculty Feedback, and Research with iPads
McCrery, E., and Sparrow, J.

TEaCH TALKS: Pedagogical Training for Graduate Teaching Assistants
Kajfez, R., McNair, L., and Adams, S.

*Entering the Hallowed Halls of Cyberspace: Developing Strategies for Teaching,
Interacting, and Delivering Information Online*
Turner, M., and Turner, S.

Using Games for Multiculturally Inclusive College Student Learning
Lo, Y.

Augmenting Problem-Based Learning with an Analysis of Instruments
Moore, D.

*Implementation of a Competency-Based Curriculum: Challenges and Benefits of
a Program-Approach Model in Reforming Undergraduate Programs*
Kozanitis, A., and Forest, L.

Tackling the Problem of Problem-Based Learning
Brent, R., Deaton, M., Tang, J., Mary, H., Altaii, K., and Goodall, P.

Nursing and Paramedic Students Collaborate in CPR/BLS Simulation Activities
Staykova, M., Cromer, M., Stewart, D., Everidge, J., Jones, S., Bailey, C.,
Lyon, C., Sharp, M., Wilson, R., and Carhart, E.

<http://www.cider.vt.edu/conference/>

21st-Century Digital Writing: Peer Review, Faculty Feedback, and Research with iPads

Ennis McCreery, *Graduate School & Department of English, Virginia Tech*
Jennifer Sparrow, *Learning Technologies, Virginia Tech*

Abstract: This session will explore the use of iPads throughout a full semester freshman composition course. In the course, ENGL 1015: First Year Writing, iPads were loaned to all students in the class for the entire semester. The goals of this pilot project were to increase the 21st-century digital skills that students are increasingly needing as they progress through their college work and beyond. Throughout the semester, students utilized the iPads for peer review, to review written and audio comments from the professor, and to streamline their research process. Students attained not only the learning outcomes of improved writing and peer review, but also a set of technology skills that can be transferred to other applications and platforms. Students utilized PDF mark-up tools to do on-the-spot reviews of their classmates' writing. The professor utilized the iPads as a tool for feedback on student work. Feedback was provided in both written and audio comments that students could access on their iPads. The presenters will cover the process of using iPads from the initial loan to final exams. They will discuss the successes and challenges that were encountered throughout the semester. Additionally, the activities will be linked to sound pedagogical practices.

Literature Review

Chickering and Gamson (1987) outlined seven principles for good undergraduate education that included: student-to-student interaction, timely and constructive feedback, faculty-to-student interaction, and engaged learning. The iPads utilized in this class were a new tool in addressing these principles in a freshman writing course. Additionally, Crockett, Jukes, and Churches (2011) have expanded on the idea that students need to move beyond simply being consumers of content to becoming producers of content and that digital fluency is critical for student success. This session will address the use of iPads in increasing student production of papers and feedback in digital formats. Student engagement in their assignments and with faculty are critical factors in student retention and success (Kuh, Kinzie, & Schuh, 2005).

Goals and Objectives of the Session

At the conclusion of the session participants will be able to:

1. Explain how tablet technologies are matched with specific learning outcomes
2. Compare iPad technologies with analog options for peer review
3. Examine and critique the use of audio comments on student work

Description of the Practice to be Modeled

This session will explore the effective integration of iPads into a first-year writing course. The session will address getting students comfortable with the technology, the anticipated and real-world uses of the iPads. Successful implementation included "peer-review speed-dating," where students would spend 5 minutes reviewing each other's work and then switch to another partner. This allowed for several students' input on each paper. The students also utilized the iPads as a research tool to increase their use of digital tools for creation of writing, collection of resources, and digital storage of all of this data. The session will include real-world examples of student work along with a pairing of that work with learning outcomes and how these practices increased students' digital skills. The professor utilized the iPads for feedback that included both written and audio comments on digitally submitted work. The professor will walk session participants through this process to demonstrate the ease of use of the technologies.

Discussion

This pilot for the Fall 2012 semester has had some marked benefits and challenges for both the faculty and students. The discussion will include how the institution was able to support some of these challenges as well as the surprising ways that students used the iPads for their work. The presenters will share student feedback on the iPads that was collected at the conclusion of the semester.

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TEaCH TALKS: Pedagogical Training for Graduate Teaching Assistants

Rachel L. Kajfez, Lisa D. McNair, & Stephanie G. Adams, *Department of Engineering Education, Virginia Tech*

Abstract: Graduate teaching assistants (GTAs) are involved in many different courses across college campuses. Their roles vary from graders to instructors of record. They are often well versed in their disciplines and know their content extensively. Unfortunately, their pedagogical knowledge is often lacking, especially in those disciplines where research takes precedence to teaching, such as in engineering. This practice session will work through three TEaCH TALKS developed for a first-year engineering program. Specifically, we will focus on *Getting to Know Your Students*, *Teaming*, and *Classroom Assessment Techniques (CATs)*. While this work has been situated in engineering, TEaCH TALKS are modular and can be implemented in a variety of classes and disciplines. Through these sessions, we have begun to make small changes to shift to a culture where teaching practices and continual improvement are highly valued.

Graduate teaching assistants (GTAs) fill a variety of roles in the classroom. They serve as workshop leaders, lab facilitators, graders, and even instructors of record. While these individuals are usually highly trained on *what* to teach, they often are lacking in the skills that address *how* to teach. The project described in this paper addresses the lack of pedagogical training most GTAs receive. For this work, we have developed a series of TEaCH TALKS to help GTAs learn about pedagogical issues in the classroom. The activities designed to teach pedagogy content are situated within a first-year engineering context, but the topics are valuable to a variety of disciplines. The activities are grounded in theoretical approaches, research-based literature, and the results of an internal needs assessment. For this practice session, we will demonstrate and ask for participant participation in three of our six TEaCH TALKS.

Literature Review

To date, little research has been conducted in the field of engineering related to GTAs, but a variety of literature exists that supports TEaCH TALKS in general. For this work, we have chosen to focus on three of our six TEaCH TALKS, including *Getting to Know Your Students*, *Teaming*, and *CATs for Content*. For the purposes of this session, we will only briefly summarize our TEaCH TALKS on *Addressing Teaching Evaluations*, *CATs for Teaching Practices*, and *Wrap-Up Activities*. For each of these sessions, established educational research served as the base of the activities to help our GTAs become familiar with pedagogical topics, and to address needs identified from a GTA needs assessment and program evaluation.

Getting to Know Your Students: This session is grounded in the theory of communities of practice (Wenger, 1998) and self-determination theory (Ryan & Deci, 2000). In the communities of practice theory, there are three components that are needed for success: joint enterprise, shared repertoire, and mutual engagement (Wenger, 1998). This TEaCH TALK specifically targets mutual engagement where we encourage our GTAs to get to know their students in order to begin to build a working student-teacher relationship where both parties are actively engaged in communication, respect, and learning. This session also targets relatedness, which is a key component of self-determination theory (Ryan & Deci, 2000). Again, we want our GTAs to relate or connect with students to foster an environment for motivated learning.

Teaming: This TEaCH TALK was informed by the teaming research of Adams (2003), Kaztenbach and Smith (1993), and Hackman (1998). The use of teams in engineering is extremely common, so giving our GTAs information on methods for teaching teaming practices was essential. This session focuses on understanding why we use teams, the difference between a group and a team, and the development of teams over time. Topics related to conflict resolution were also explored to give GTAs the tools to handle these types of situations with their students.

CATs for Content: This session is the first part of a two-part Classroom Assessment Techniques (CATs) series informed by the work of Angelo and Cross (1993). To begin this session, assessment in general was discussed, focusing on the why, what, and how of assessment. Next, the session moved to an in-depth discussion of Angelo and Cross' (1993) view on CATs including their definition, use, and a variety of implementations.

Methodology

TEaCH TALKS are theoretically-grounded, 30-minute pedagogy sessions incorporated into the content training GTAs already receive. These sessions are designed to be modular and applicable to a variety of classes and class topics. For the purposes of this practice session, we will only be demonstrating three of our six modules, but we believe these three modules showcase the importance and flexibility of TEaCH TALKS. In addition to conducting the TEaCH TALKS, we also developed a website with additional resources for our GTAs. This site houses the TEaCH TALKS Power Points along with flyers about the activities, additional references, and space for GTAs comments and experiences to be uploaded and archived. This is a working site that we will continue to update as TEaCH TALKS continue to develop.

Results

Each TEaCH TALK is composed of four segments. The first is the theoretical grounding related to the topic. The second is an activity designed for the GTAs to enact the pedagogy topic. The third is an activity that the GTAs implement in their own classes. Finally, the last segment is a follow-up and discussion related to the activities they implemented in their own sections. This structured approach to TEaCH TALKS, which includes discussion and follow-up, was essential to gain GTA and faculty buy-in with the training.

Discussion

TEaCH TALKS have been implemented in three courses over one semester in a first-year engineering program with approximately 25 GTAs. Participant feedback indicates that the project was a success and that GTAs did learn basic pedagogical content that they can apply to their future teaching. The biggest challenge for TEaCH TALKS is time. The courses in which the activities were implemented are highly structured, and finding the five to ten minutes in a class to conduct the activities proved to be a challenge for the GTAs. This project will continue into the future, and we will address this concern by identifying more concrete locations for activities within the GTAs' class schedules. Another challenge is institutional climate. In many programs at a research institution, teacher training seems to fall short as it is not valued as highly as research. Shifting department culture and creating an environment for passionate teachers includes challenges, but with support from central faculty members and administrators, we believe we have made important steps towards cultural reform in our department where pedagogy knowledge is now more integrated.

While this project is continuing on a small scale at this time, we also have long-term goals for the pedagogy content training. For example, we would like to see these topics covered in a course required for GTAs in the first-year program. This would allow us to address the time issue more directly. Also we would like to see TEaCH TALKS become a scaffolded experience where more experienced GTAs lead the various sessions. We believe the future of TEaCH TALKS is promising, and we will continue to develop them as an integral part of education in our college.

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Entering the Hallowed Halls of Cyberspace: Developing Strategies for Teaching, Interacting, and Delivering Information Online

Matthew R. Turner, *School of Communication, Radford University*
Scott A. Turner, *Math and Computer Science, UNC Pembroke*

Abstract: As more and more universities push for online delivery of course content and even fully online courses, teachers have to not only navigate new technologies and learn new skill sets, they also have to confront new pedagogical challenges. These include establishing a presence as an instructor, getting feedback from students, and holding discussions with students either largely or exclusively online. While there has been significant research about online course delivery, and there is often help available in terms of technological resources and training on content management systems, less has been done to address some of the pedagogical pitfalls of being a teacher in an online environment. How, for instance, is one to get meaningful feedback from students about the class without having face-to-face meetings or other forms of engagement? What is the best (often, of necessity, the most cost effective) way to deliver content and assignments? Participants in this practice session will engage in a guided discussion focusing on how best to use online resources to communicate effectively with students about the course and how to deliver content. Techniques for introductions to the course and the instructor, how to deliver lectures and discussions, as well as maintain an online presence will be presented. Additionally, the presenters will provide examples of how to use these techniques in various types of courses such as traditional classroom, hybrid, and fully online formats.

Literature Review

Online class materials have become the norm in education. The degree to which the online aspects are used varies greatly, but most courses are at least partially online. The spectrum ranges from classes that post announcements and the occasional quiz to hybrid courses that sometimes meet face-to-face and sometimes online to truly online classes where everything is done digitally. The reasons for taking a course online are just as varied. It could be a matter of accessibility or an attempt to invert the classroom and move more of the lecture oriented material outside of the classroom (Lage, Platt, & Treglia, 2000). It could also be done as a way to provide education to the masses as with massive open online courses (Chamberlin & Parish, 2011) or just to improve revenue streams. The reasons are not really as important as the fact that this is a new reality for education.

Some of the challenges that come with this change include how to effectively interact with students online and how to present materials to those students. The issue of interaction becomes a real problem as the size of the class grows. The nature of an online classroom makes it easy to add more “seats” and expand the course. Looking at the extreme example of a massive open online course, how does one even start to interact with that many people (Chamberlin & Parish, 2011)? How do the students find their place in that environment? It is a problem at that level and it is a problem (although a somewhat smaller one) in a more modest size class. Presentation of information is another concern. Take the idea of an inverted classroom where lecture material is presented outside the class and activities, demonstrations, and exercises are done inside the class. Is posting the lecture slides enough to ensure that the students review the material well enough to be ready for class? Considering the nature of the web, instructors should be able present the information in more diverse ways that meets a wider variety of learning styles to help engage the students outside of class. Of course, the question is how to do that efficiently in an online environment.

The need for interaction in an online class has been well documented. The students need to be able to work with their classmates and their instructor and the instructor needs to receive feedback about how the course is proceeding and how the students are doing in order to effectively guide the class and determine if learning outcomes are being achieved. Being able to interact with their classmates and feeling that they are part of the group, influences students’ perception of learning and their comfort level with the class (Picciano, 2002). Other researchers have noted that feedback about the quality of work or the simple act of acknowledging contributions was an important part of this interaction (Graham, Cagiltay, Lim, Craner, & Duffy, 2001). In fact, researchers found that lack of feedback from the instructors caused students to contribute less to the class (Vrasidas & McIsaac, 1999). The type of interaction also seems important. Social interaction may have an effect on learning, more so, perhaps, than just working together (Jung, Choi, Lim, & Leem, 2002). All of these aspects must be considered for the online portion of a course to be successful.

When considering how to present materials on the web, taking into account the learning styles of the students might be very beneficial (Felder & Brent, 2005). When examining the types of materials and assignments that generally get posted online (lecture slides, readings, discussion boards, quizzes), one cannot help noticing that they generally fall into the verbal learning style. Expanding the types of material may have great benefits for the students. Adding audio or video, for instance, can have positive effects (Copley, 2007) and other, more interactive, media can be effective as well (Wieling & Hofman, 2010). Since the constraints on the students are different outside of class, the types of materials that are best suited for them may be different as well. This is something that should be taken advantage of.

Goals and Objectives

Upon completing this session, participants will be able to:

- Introduce themselves to students in an effective and humanizing way online
- Set expectations for how and how quickly they will respond to students and establish their availability
- Develop plans for being a continuing presence in the online experience
- Explore options for posting and delivering course content online
- Plan how and how often to use online discussions as well as strategies for encouraging student participation
- Develop strategies for getting and incorporating appropriate feedback from students about their courses

Description of Practice

During the session, participants will examine methods for introducing themselves to students in an online environment in a way that helps humanize them and helps the student feel more comfortable interacting with the professor. Strategies for implementing, encouraging and grading discussions will be introduced and evaluated by session participants. Session participants will also review, generate, and critique ideas for encouraging and rewarding productive student feedback about the course. A portion of the session will focus on how to utilize free and low-cost options for creating and delivering video content to students.

Discussion

Discussion among session participants will be directed towards encouraging participants to think about how they are and could be interacting with their students online and how they can build a better variety of materials and assignments that will help engage the students in this different setting. Participants will be encouraged to share ideas and evaluate how these teaching techniques will benefit themselves and their students.

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Using Games for Multiculturally Inclusive College Student Learning

Yi-An Lo, *Student Counseling Service, Miami University*

Abstract: Facilitation of active student learning has been an emphasis of effective teaching in college curriculums for a number of years. Many methods have been discussed to encourage active student engagement and assimilation of class materials. Multicultural inclusion of students has also been a widely discussed topic in social science but frequently presents challenges for effective teaching. However, the use of games for a multiculturally inclusive and sensitive topic has not been frequently discussed. This presentation will provide examples of using individual and group games in classroom settings for undergraduate students. Participants will participate in learning games and engage in guided small group discussions in applications for their specific fields.

Literature Review

Globalization and the significantly increased numbers of international students have made teaching multicultural competence a highlight in higher education (e.g. Tummala-Narra, 2009). In the construct of multicultural competence, helping students with privilege awareness and learning the significance of diversity has also been considered challenging for college professors and instructors (Tummala-Narra, 2009). Furthermore, simply paying attention on multicultural content was pointed out as insufficient (Elicker, Thompson, Snell, & O'Malley, 2009). While these are elevating challenges, appropriate use of games in the classroom has not been frequently considered in the college education for diversity and multiculturalism. The importance of preparation and communication before introducing games designed to facilitate privilege awareness and diversity was emphasized (Griffin & Jackson, 2011). Similarly, instructor comprehension of affective processes and resistance in multicultural learning was also stressed. Since multiculturalism is such a sensitive topic, normalization of student emotional reactions before using educational games or role-plays can ease student anxiety and further encourage student learning (Kablan, 2010; Stroessner, Beckerman, & Whittaker, 2009; Tummala-Narra, 2009).

Objectives

1. Define multicultural inclusive and sensitive topics in social science
2. Realize challenges in teaching multiculturally sensitive topics
3. Develop strategies in designing class activities (games) to facilitate student awareness or learning
4. Integrate strategies in course design and setting inclusive classroom cultures

Description of Practice

I will demonstrate communication techniques before the facilitation of games, such as the provision of a written respect agreement, discussion of importance of multiculturalism in the classroom (mutual benefit for majority and minority groups), and my expectations for student behavior as an instructor. Information of normalization of emotional reaction and self-care will also be announced. Then I will model several games to facilitate diversity, such as the game "identity deletion," "privilege role-play," "emotional labeling in learning diversity," and "speaking in a different voice (pair of minority-majority students coaching each other to speak up for their experiences). Bullet points of learning objectives, written respect agreement, and expectations as well as rubrics of student behaviors during games will also be provided to participants. Feedback and discussion will be facilitated after modeling the games.

Discussion

Regardless of the discipline, teaching diversity has been challenging for instructors. Engaging students in games in class may facilitate student awareness and enrich discussions with the provided structure (pre-game communication with students, respect agreement, normalization of emotional reactions, and student self-care). With strategies for class activities, instructors can further develop an inclusive class culture as well as facilitate student learning and awareness. Students can be trained to use critical thinking skills for diversity topics based on their own experience

in game engagement. Thus, I found the interactive nature of the game and the relevance in diversity can further develop student multicultural sensitivity and facilitate active learning.

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Augmenting Problem-Based Learning with an Analysis of Instruments

David Richard Moore, *Instructional Technology, Ohio University*

Abstract: Problem-based Learning (PBL) has become a common technique throughout higher education. PBL is a strategy that respects context and asks learners to engage in concrete inquiry that has consequences. PBL promotes the idea that problem-solving and the knowledge gains that accompany it are the result of transforming the problematic situation. Most PBL models rely on the learner's intuitive grasp of the operations of transformation. This intuitive approach provides inadequate guidance to the learner and too often leaves the learner with the impression that the answers are to be found *a priori* instead of as result of investigation. This paper suggests and demonstrates a specific approach to problem transformation that has its foundations in Pragmatism and more specifically in John Dewey's Instrumentalism. Instrumentalism posits that knowing is a result of transforming ideas, values, and artifacts through tools and instruments. This paper supports instructors in higher education to design PBL learning activities that encourage learners to develop an understanding of the myriad of tools, instruments and technologies that are necessary for any inquiry to be successfully concluded. Instructors who augment their PBL activities with a focus on the instruments of inquiry will find that their students are better prepared to view problems in context and will be better prepared to generalize specific solutions to wider contexts.

Literature Review

PBL challenges learners to solve problems. It is hoped that the problem presented creates a challenge that requires and entices them to investigate, analyze and synthesize information so that it leads to a solution and perhaps most importantly, the knowledge gained should be retained generalized to divergent future contexts. Boud and Feletti (1997) and Dochy, Segers, Van den Bossche and Gijbels (2003) supply an overview of a number of different approaches to PBL. Duch, Groh, and Allen (2001) and Torp and Sage (2002) discuss the benefits of PBL including developing metacognitive skills, engagement, relevance, and collaboration and embracing complexity. PBL has a number of skeptics as well; Norman and Schmidt (2000) and Colliver (2000) report that the evidence regarding PBL does not indicate substantial differences in learning outcomes. Kirschner, Sweller, and Clark (2006) characterize PBL with minimal guidance approaches and claim these techniques do little to support learning achievement because they do not address human cognitive structures. Schmidt, Loyens, Van Gog, and Paas (2007) counter this argument and suggest that successful PBL require guidance and the character of that guidance makes a considerable difference to outcomes. The issue of guidance in PBL provides an opening for an instrumental examination to support inquiry. Specifically, an instrumental approach is compatible with one's cognitive structures. For example, the instrumental approach encourages elaboration, which stimulates the accommodation of new experience into long-term memory (Chi, Bassok, Lewis, Reimann, & Glaser, 1989).

Goals and Objectives

This session will lead by example. First the participants will be introduced to a PBL model commonly used in higher education. Participants will use this model to engage in a specific inquiry. Unlike the standard PBL model participants will also be given a set of tools and instrument descriptions to use while they are engaged in finding a solution. Simultaneously, they will be provided with the means to identify, catalog and select tools instruments and technologies. This selection process will demonstrate the wide variety of instrument use identified by John Dewey in his Instrumental philosophy. Once a solution is put forward participants will engage in an activity that requires them to analyze their chosen instruments. One of the most challenging aspects of PBL is to relate the conclusions reached in an inquiry to a larger body of knowledge; this is precisely where an examination of the tools involved in inquiry can be the most beneficial. The participants will be assisted in creating solution application analogies that will help them generalize their knowledge.

This session will end with a generalized description of PBL, as well as an Introduction to the Instrumental philosophical position. Evidence will be provided supporting the technique and describing situations when the technique is particularly useful. Finally, before breaking, the session will conclude with the participants engaging in

debriefing task that will allow them to compare the introduced method to other learning experiences they may be familiar with.

Description of Practice

A more traditional PBL approach would be to have the learners engage in a problem solving process, which might include such steps as problem exploration, summarizing resources, writing a problem statement, listing possible solutions, evaluating solutions, proposing and submitting solution. An instrumental approach to PBL uses the same basic structure but provides specificity for when summarizing resources and requires learners to explicitly describe how the instruments transform the problematic situation.

Discussion

This method of implementing PBL is particularly useful because of the specificity it requires in the problem solving process and how it explicitly addresses cognitive structures necessary for learning to occur. The particular tools involved in problem solving have attributes that can be applied to a variety of problems, and often have been used in other contexts by learners, thus their conceptualizations are likely to have residence in one's long-term memory. As with any instructional strategy that is unfamiliar, initial use may impose extraneous cognitive load on the learner. In order to reduce the impact of this load, training and management strategies need to be available to the learner (Schmidt, Loyens, Van Gog and nad Paas F, 2007). This session will provide examples of the technique and provide a simulated introduction using templates demonstrating how learning teams would identify, collect, analyze and synthesize knowledge about the instruments and technologies used in inquiry. The approach described in this proposal is as true to John Dewey's epistemological method of knowing (Dewey, 1938). Dewey described knowing as a technological artifact, in other words we know our world through our instruments (Hickman, 1990). This session introduces this philosophical approach at a practical, classroom-ready level.

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Implementation of a Competency-Based Curriculum: Challenges and Benefits of a Program-Approach Model in Reforming Undergraduate Programs

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Abstract: From 2004 to 2006 Polytechnique Montreal (PM), renewed all of its 11 undergraduate programs, by modernizing curriculum and introducing student-centered pedagogies, organized under a program-approach model. This initiative was a first effort towards a competency-based model. The five-year follow up surveys showed very positive results, mainly with student motivation, student satisfaction, and student retention and success rate. In 2010, the Canadian Engineering Accreditation Board introduced new criteria for all Canadian undergraduate engineering programs. Thus by 2015, PM must demonstrate its graduates possess 12 attributes (competencies) for the purpose of accreditation. This comes as an opportunity, but also as a challenge, to improve student training and assessment methods.

Literature Review

The idea of a program-approach model is not new to the educational field; it goes back to the early 1990's, where it was first put forth at the general and vocational colleges level in the province of Quebec (Dorais, 1990; Goulet, 1990), but was only recently introduced at the university level (Prégent et al., 2009). The program-approach is a pedagogical model that refers to a systematic and coherent organization of the curricula, and the learning activities within a program. This model presents the following characteristics: 1) An open and transparent dialogue between stakeholders to ensure better integration of learning; 2) The coherence between policies (aims, goals, values, pedagogical intentions) and teaching activities; 3) A clear vision and definition of outcomes and graduates' desired end profile at both the program level and the course level. The program-approach organizes all the resources around these characteristics to the benefit and needs of student learning. A program-approach is opposed to a course-approach, where students choose among a series of courses without any explicit relation to each other, and often develop a sense of compartmentalization between the disciplines and the courses. A program-approach puts all the elements in perspective by providing a holistic and longitudinal point of view. Both students and instructors share a common understanding of the program's intentions; get accurate information on their progress; perceive explicit relations between topics, courses, and disciplines.

Goals and Objectives

Participants in this session will get acquainted with a program-approach model that was deployed to reform and renew 11 undergraduate engineering programs. They will discuss its utility as a curriculum and pedagogical planning and organization tool at the university level, and consider to what extent programs at their institutions could utilize a program-approach model. Following a brief presentation of the 12 new attributes students must now possess at the time of graduation, the group's comments and suggestions will be solicited regarding the assessment scheme PM has deployed or is planning to deploy in a near future.

Description of Practice

In 2003, Polytechnique Montreal (PM) reviewed its undergraduate educational model in order to survive and thrive. The main reasons were that during their first year, students lacked motivation; their success rate was not satisfying; other universities had become more appealing and the inscription rate dropped to the benefit of these other universities in the province of Quebec, Canada. PM also received messages from industry to better prepare its students to these «other skills» so important in the actual context of the market place: managing-self, communicating, managing people and tasks and mobilizing innovation and change (Evers, Rush, and Berdrow, 1998). This

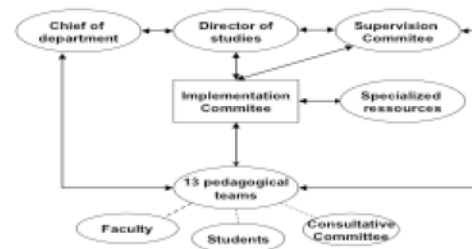


Figure 1- Organization structure

program review is in spirit of the recent evolution of engineering programs that began in the USA and in other regions of the world since the mid-80 (Gordon, 2003).

From 2004 to 2006 at PM, all 11 undergraduate programs were renewed, by modernizing curriculum and introducing student-centered pedagogies, taking into account the needs of the society while focusing on today's students' strengths. If this operation were to be successful, the process could not be top-down. So PM decided to engage all the faculty members in a bottom-up process, where an implementation committee laid out a project timetable and deliverables, which described the work to be done. The project deliverables define the principles on which the programs must be renewed, and described the organization of work. Thus, according to a book of constraints proposing a rigorous process and general innovative content, faculty members had to do the work for their own program, and by receiving a regular feedback from their colleagues of all the other programs. This process needed the creation of «pedagogical leading teams» in each program, weekly meetings of at least 40 professors discussing outputs, the respect of a very tight timetable under the soft (but strong) central implementation committee. Figure 1 shows the organization structure used during the process. Professors involved were pushed, tired, but the openness of the process and the hard work and enthusiasm of the faculty overcame the fatigue and the stress of such an operation where the academic leaders and administrative leaders had an important motivational and guidance role to play. And it worked!

In 2010, as if all that weren't enough, the Canadian Engineering Accreditation Board (CEAB) (Engineers Canada, 2009), following ABET's 2000 model, introduced new criteria for all Canadian undergraduate engineering programs. Thus by 2015, PM must demonstrate its graduates possess 12 attributes (competencies) for the purpose of accreditation. This new challenging task presents yet another opportunity to further improve the programs, by means of deepening course and knowledge integration, increasing student responsibility awareness, providing clear goals and objectives, allowing greater student control over their progress, and by introducing broader authentic student assessment. In order to fulfil the task, a similar central implementation committee has been actively working for the past two years on planning the process, designing the tools and procedures, and organizing the implementation for all PM undergraduate engineering programs.

Discussion

In order to evaluate the effectiveness of the program-approach model, each semester a follow-up survey, including 20 questions, was administered to the students. These five-year follow-up surveys showed very positive results, mainly with student motivation, student satisfaction, and student retention and success rate. The process proved a positive impact on faculty members as well, with most of them affirming being generally very satisfied with the results, gaining a higher degree of self-confidence, and having no desire to going back to the old programs. Today, PM is aware that further changes will be needed in order to comply with the new CAEB criteria.

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Tackling the Problem of Problem-Based Learning

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Abstract: An experimental course sequence in James Madison University's Integrated Science and Technology (ISAT) program immersed students in a year-long, problem-centric learning experience, focusing on the global water crisis. Throughout the year, student teams analyzed the problem and formulated solutions for the main water issues in their assigned region. This paper reports findings from an effort to assess improvements in students' complex problem-solving skills throughout the course using three different instruments focused on "problem-centric habits of mind" (PCHOM). Two instruments based on student self-reflection indicated conscious efforts to apply the PCHOM. However, one instrument indicated only marginal impact on the actual quality of analysis. This raises important questions about how to measure complex problem-solving capabilities in undergraduate students and about how to most effectively teach such skills.

Literature Review

This paper describes a multipronged two-semester evaluation of complex problem-solving skills among students in an experimental problem-based learning course sequence during the 2011/12 academic year. Problem-based learning (PBL) is a student-centered pedagogy in which learning centers on a complex, multifaceted, real-world problem that does not have a single correct answer. The PBL process typically involves collaborative student teams engaged in self-directed learning to gain and apply the necessary knowledge domains to solve the problem. The goals of PBL include the development of flexible integrated knowledge bases, problem-solving skills, self-directed lifelong learning skills, teaming and collaboration skills, and intrinsic motivation (Hmelo-Silver, 2004). PBL methods have been used throughout higher education (Amador, *et al.*, 2006) and in various forms (Maudsley, 1999).

Critics of PBL (see, for example, Kirschner *et al.*, 2006) argue that empirical research fails to support the technique. Some have found that the cognitive load required of students in self-directed discovery reduces learning outcomes (Sweller, 1988). These critiques focus on the impact of PBL on disciplinary learning. However, improved critical thinking and complex problem solving may be just as important as disciplinary-specific knowledge and skills. James Madison University's BS program in Integrated Science and Technology (ISAT) instituted an experimental junior-level, 7-credit, two-semester, problem-solving course sequence on the global water crisis to specifically develop these complex problem-solving skills.

Methodology

Teams of students were assigned regions of the world that suffer from significant water crises (such as the Nile River or Tigris River basins). In the first semester, teams worked to define the problem in their region, identify stakeholders, develop literacy with relevant knowledge domains, and evaluate the system dynamics relevant to their case study region. During the second semester, the teams developed, evaluated, and presented integrated solutions to the problems they identified. Throughout the course, teams documented their progress on a website that was subject to regular review by peers, by the teaching team, and by an external panel of practicing professionals.

The ISAT faculty recently developed their own description of "complex problem solving" in the form of nine *Problem Centric Habits of Mind (PCHOM)*, which describe the problem-solving approaches and dispositions that practitioners who have graduated from the ISAT program should embody. Three of the tools used to evaluate student progress toward the PCHOM were: 1. the *Problem-Solving Analysis Protocol (P-SAP)* assessment (Steinke and Fitch, 2003), applied in a pre/post repeated measures design to a control group and to the class cohort, 2. a *PCHOM Self-Inventory* in which students at the end of the course reflected on the extent to which the PCHOM affected their thinking while completing the *Protocol*, and 3. a *Teaching Analysis Poll (TAP)* in which the class cohort provided qualitative reflections to a neutral outsider.

In the P-SAP, students were presented with an open-ended statement of a complex issue ("One billion people do not have access to sufficient food to be healthy and lead an active life.") and asked to state: 1. the ways in which it might be a problem; 2. some possible causes; 3. potential solutions; and 4. strengths and limitations of those solutions. The

responses were blindly rated by six faculty raters, with each response being rated by at least two trained raters using a common rubric. Scores were assigned on two dimensions: the *locus* and the *complexity* of the response. The *PCHOM Self-Inventory* was administered immediately after the *P-SAP* “post” assessment. Students were asked to reflect on the extent to which they practiced the nine PCHOM as they addressed the questions in the *P-SAP*. Finally, at the end of the two-semester sequence, another faculty member led the class in a group discussion and individual reflection on the course in a *Teaching Analysis Poll (TAP)*. Among other things, the *TAP* sought to gauge the degree to which students felt that the course had helped them learn how to tackle complex problems.

Results

The one quantitative assessment instrument yielded a less positive view of the gains in complex problem solving than did the two qualitative instruments. The *PCHOM Self-Reflection Inventory* ($n = 16$) indicated that 5 of the 9 problem-centric habits of mind were prominent in the thinking of a majority of students, while all of the habits of mind were at least marginal factors in the thinking of more than 81% of students (Table 1). Results from the *TAP* ($n = 22$) were similar, with most students reporting that the course sequence improved their complex decision-making, and many pointed to the intensive nature of the team-based inquiry and the input from different instructors as being particularly useful. The results from the quantitative *P-SAP* ($n = 19$, with 20 in control group), however, indicated only marginal evidence of improved problem-solving skills. With four questions rated on two scales (*locus* and *complexity*), eight ratings were obtained for each student’s responses. Of the eight ratings, only one evidenced a significant difference between the control group and the students in the experimental course sequence.

Table 1: PCHOM Self-Reflection Inventory Results
Global Water Course Sequence, Spring, 2012 (n=16)

Habits of Mind	To what extent did your thinking and answers reflect these Habits of Mind?		
	Prominent in my thinking	Marginal factor in my thinking	Not on my radar screen
Problem causes described in terms of systems involving interactions among multiple actors, natural phenomena and social/cultural factors	13	3	
Adopted long term perspective for understanding the causes and for implementing solutions	6	9	1
I recognized the need for expertise from multiple disciplines in order to address the problem	7	6	3
I thought about the need to engage diverse stakeholders with possibly disparate viewpoints	9	5	2
I explicitly addressed relevant the political context and dynamics	3	10	3
I can describe how sound scientific methods would be needed to address the problem, including both natural and social sciences to understand and solve the problem	6	10	
I would assess possible solutions by considering their technological, economic, cultural, social, and political merit	11	4	1
I would evaluate solutions based on their potential system-wide impacts	8	8	
I articulate my own assumptions and the limitations of my mental models and understanding of the problem	6	10	

Discussion

Assessing student learning in complex problem solving can be challenging, particularly using quantitative methods. Given the multifaceted nature of complex problems, it is difficult to find an instrument that is quick to implement and robust in its results. Despite clearly positive qualitative, self-assessed evidence of student learning, the quantitative faculty-assessed evidence failed to demonstrate clear gains. For those venturing outside of traditional content-focused, disciplinary courses into extended PBL for complex problems, assessment may remain a challenge.

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Nursing and Paramedic Students Collaborate in CPR/BLS Simulation Activities

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Abstract: Developing competence in effective cardio pulmonary resuscitation (CPR) and Basic Life Support (BLS) is often a result of substantial training. Nursing and paramedic students are expected to demonstrate competence during events requiring CPR/BLS in community or clinical settings. The purpose of this study was to evaluate nursing and paramedic undergraduate Bachelor of Science students' self-perception of the effects of an interprofessional (IP) learning activity on students' knowledge retention and ability to perform CPR/BLS. **Methodology:** This descriptive study was based on a triangulation including an interaction among students, 1:1 observation by certified faculty, and pre-and-post collaborative-activity survey. **Sample:** 36 nursing and 20 paramedic (EMS) students. A survey, including a questionnaire and a visual analog response-scale, and collected data were used. Mean and standard deviation were calculated. A paired *t*-test was used to establish if the means were statistically different from each other. **Results:** The EMS students started with a higher self-perception of knowledge retention and ability to perform CPR. The nursing students started with lower self-perception; however, after the collaborative activity, the nursing students' self-perception significantly increased. **Conclusions:** The nursing and paramedic students' knowledge retention and ability to perform CPR/BLS increased after the interprofessional learning activity. However, the IP activity was more beneficial to the nursing students. Nursing students may benefit from curriculum integrating CPR/BLS knowledge and skills.

Literature Review

Developing competencies in effective cardio pulmonary resuscitation (CPR) and Basic Life Support (BLS) is often a result of substantial training. Many authors urge the curricula of healthcare professionals to reinforce CPR/BLS skills and to evaluate the performance of these skills (Krahan, 2011; Oerman et al., 2010). Nursing and paramedic students are expected to demonstrate competence during events requiring CPR/BLS in community or clinical settings. Melby (2001) noted that in emergency situations collaboration between nurses and paramedic personnel is critical for quality of care and for positive patient outcomes. The Institute of Medicine (2003) and the Quality and Safety Education for Nurses (2011) have considered interdisciplinary teamwork and collaboration as significant components to quality and safe patient care. Studies show that after initial certification, the retention of the CPR/BLS skills requires reinforcement; otherwise, a deterioration of skills is observed (Brown et al., 2006). Furthermore, Martin (2005) concluded that in settings of stressful situations nurses, physicians, and paramedics have deviated from the CPR/BLS standards or have demonstrated a lack of proficiency. Engaging students in simulation activities with other healthcare professionals may encourage the students to practice CPR/BLS skills in a collaborative environment, self-evaluate the retention of these skills, and enhance the readiness to enter the multidisciplinary-healthcare field. This study addressed the following research question (RQ): For nursing and paramedic students, what is the students' self-perception of the effects of an IP learning activity on students' knowledge retention and ability to perform CPR/BLS?

Methodology

This descriptive study was based on a triangulation that included as follows: (a) IP learning activity based on students' team interactions, (b) 1:1 observation by certified faculty, and (c) pre-and-post learning-activity survey. A convenient sample of 56 students, 36 junior-level nursing and 20 sophomore-level paramedic (EMS) students, was observed and evaluated of CPR/BLS knowledge and skills. Ten faculty members, 7 from nursing and 3 from emergency services, observed the students 1:1. To qualify for the study, a student should have (a) completed a formal CPR/BLS training and (b) provided a proof of a CPR/BLS certificate. A pre-activity survey included a questionnaire and a visual analog self-knowledge assessment tool (VASKAT) to collect data. Zero (0) on the scale indicated the lowest rating and ten (10) on the scale indicated the highest self-knowledge and skills rating. The study included a case-based simulation activity requiring the implementation of the new 2011 American Heart Association

BLS guidelines. Manikins of moderate fidelity were used during the simulation. A team of 2 nursing and 1 paramedic students worked together acting as healthcare providers. During the activity, the students helped each other performing the CPR/BLS skills correctly using a professional language and constructive feedback. After the activity the students took the post-activity survey.

Data Analysis and Results

Percentage, mean, standard deviation and paired t-test were calculated for each question. The EMS students started with a higher self-perception of knowledge retention and ability to perform CPR/BLS ($\mu=9.37$, $SD=0.96$). After the collaborative learning activity the students' self-perception of showed only a slight increase ($\mu=9.74$, $SD=0.63$) with a 0.37 difference in the value of the means in the pre-and-post survey responses. One reason for this high initial rating could be the EMS students' annual CPR competency validation. The nursing students started with lower self-perception ($\mu=6.93$, $SD=2.40$); however, after the collaborative learning activity, the students' self-perception of knowledge retention and ability to perform CPR/BLS significantly increased ($\mu=8.90$, $SD=1.60$) with a 1.97 difference in the value of the means in the pre-and-post survey responses. The $t(19=2.31154E-08)$ for the EMS students and $t(35=1.2587E-55)$ for the nursing students with a p-value that is less than 0.01 led to rejection of the null hypotheses; IP activity led to an increase of the students' self-perception of knowledge retention and ability to perform CPR/BLS after the collaborative activity.

Conclusions

The nursing and paramedic students' knowledge retention and ability to perform CPR/BLS increased after the interprofessional learning activity. However, the IP activity was more beneficial to the nursing students. Nursing students may benefit from curriculum integrating CPR/BLS knowledge and skill refreshment classes or annual CPR/BLS competence validation.

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Friday

February 8, 2013

Session 14

11:20-12:10 PM

Presentations:

*Enhancing Student Engagement, Faculty Presence, and Community in Online and Blended Courses:
Using VoiceThread, Blog Tools, and Other Web 2.0 Technologies*
Budhai , S., Loomis , F., and Ortagus , J.

Promoting Civic Engagement in Lower Level General Education
Bartley, A., Blevins , B., Ren, M., and Russell, H.

Modeling Writing Autoethnography as a Research Method and Pedagogical Tool
Munly, K., Dana, S., Grimes, M., Henderson, J., McCloud, J., Tilley-Lubbs, G.,
Westfall, S., and Smart-Smith, P.

*Library Resources, Copyright, and Open Source Materials
or How to Use Free Stuff and Still Cover Your ... Assets*
Turner, R., and Turner, S.

*Innovation in Teaching and Technology:
Designing a Faculty Development Initiative in Higher Education*
Rieber, L., Walker, B., and McCalla, L.

Culturally Appropriate Online Learning: A Multifaceted Challenge
Edmundson, A.

Popularity vs. Pedagogy: What Do We Know about ePortfolio?
Bryant, L., and Chittum, J.

Digital Internships: Examining Student Skill Development in Online Collaborations
Dredger, K., Matin, J., and Nobles, S.

<http://www.cider.vt.edu/conference/>

Enhancing Student Engagement, Faculty Presence, and Community in Online and Blended Courses: Using VoiceThread, Blog Tools, and other Web 2.0 Technologies

Stephanie Smith Budhai, *Education and Human Services, Neumann University*
Frederick Loomis, *Education Policy Studies, Pennsylvania State University*
Justin Ortagus, *Education Policy Studies, Pennsylvania State University*

Abstract: With the increase of online degrees, there have been some concerns about teaching effectiveness and student engagement. While some instructors are well versed in teaching in the face-to-face setting, some have difficulties translating that effectiveness in the online environment. Several comprehensive multimedia tools are available to assist online faculty members with maintaining the integrity of online courses while maximizing their teaching effectiveness. VoiceThread and Blogging Tools provide students with a seamless learning experience, enhances understanding of multimedia content, and helps to build a stronger sense of presence within a learning community. This practice session will demonstrate how the use of online instructional tools, such as VoiceThread and Blogging Tools, can be used to foster improved instructor-student and student-student engagement. Session participants will view sample online courses used at two unique institutions, experience the ways in which VoiceThread and Blogging Tools have been used, and discuss ways to incorporate engaging online resources in their own online courses. During the session, participants will practice interacting with the features of the tools and leave with an understanding of how to integrate these tools in their own classrooms.

Literature Review

Current research indicates that when there is a “sense of presence” in online learning, it can greatly enhance the instructor-student relationship, foster greater student-student learning, and improve professional graduate degree programs. Biocca and others (2001) describe the concept of presence as two interrelated constructs: “*telepresence*” (the sense of being there) and “*social presence*” (the sense of being with others, in community). Excellent online programs are designed to create a *sense of presence*, which establishes a culture of being there and being together throughout the learning experience (Lehman and Conceicao, 2010). The sense of presence has cognitive, social, and instructor-driven dimensions as part of the creation of an *online learning community*. In some cases, the resulting sense of presence and community extends beyond the formal, surface-level learning to create deep relationships to be developed in the course or degree program. This is achieved when the course designer/instructor places the learner at the center of the course development process (Moore and Kearsley, 2010).

Goals and Objectives

The overarching goal of this session is to provide participants who teach in online, blended, or hybrid settings an understanding of how two specific learning technologies can be used to engage students and impact overall teaching effectiveness. By the end of the practice session, participants will be able to:

1. Understand how instructional technology tools can be used to facilitate a sense of presence in student learning
2. Demonstrate the use of VoiceThread and blogging in online and hybrid courses
3. Utilize student engagement with learning technologies to assess their teaching effectiveness
4. Build online learning communities that facilitate student-student and instructor-student interactions

Description of Practice to be Modeled

The presenters will begin the program with a brief overview of what the literature says about creating presence and engaging students in an online setting. This will help to set the tone for the duration of the program, as it is based on both theory and practice of effective teaching. Next, the presenters will demonstrate the specific components of using VoiceThread and Blogging Tools and how each can be used as a student engagement tool. Special attention will be given to showing how VoiceThread and blogging tools can serve the dual process in promoting student-student and instructor-student interactions. Examples of how to incorporate asynchronous video technologies to be used in a variety of courses will be a central focus. In addition to interacting with the audience throughout the

session, the final stage of the session will be highly participant-centered and effective practice sharing will be encouraged. A primary objective behind our participant-centered demonstrations is to allow participants to experience and overcome potential challenges one may face during the initial stages of the process. Small groups will be formed and given discussion questions from which to work. Additional time will be allotted for groups to report out to the larger group. A final question and answer session will take place at the end of the program.

Discussion

This presentation will demonstrate the theory of presence in practice through the use of learner-centered instructional design, coupled with the application of new and emerging technologies (Vai and Sosulski, 2011). Too often, instructional design is technology-driven and not learner-centered, rather than a search of the appropriate tool to reach the course objectives (i.e., how faculty and designers collaborate to choose the most appropriate application of technology to support teaching and learning). We will briefly review the concepts of how to create presence in online teaching and demonstrate several course examples to illustrate theory to practice in the use of Web 2.0 technologies, such as VoiceThread and blogs.

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Promoting Civic Engagement in Lower Level General Education

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Brenta Blevins, *Department of English, University of North Carolina at Greensboro*

Abstract: In recent years, academics like Andrew Delbanco and organizations such as AAC&U have called for a restoration of the centrality of civic learning to the mission of public colleges and universities. As former and current members of a university community that is currently championing a “scholar-citizen initiative,” the presenters have designed activities and assignments that encourage their first-year writing students to engage with university and local communities. The session will define civic engagement, describe various assignments, discuss pedagogical strategies, and reflect upon the benefits and challenges of incorporating a civic-engagement component into lower-level general education courses. Participants will be asked to work in pairs or small groups to plan assignments or activities that would encourage civic engagement.

Objectives

Upon completion of the session, participants will have:

- A working definition of civic engagement
- A list of the pedagogical benefits of encouraging civic engagement in the general education classroom
- A set of possibilities for incorporating a civic-engagement component into their courses, as well as an understanding of the challenges they might face when doing so

Literature Review

In January 2012, The National Task Force on Civic Learning and Democratic Engagement issued their report “A Crucible Moment: College Learning and Democracy’s Future.” The report, which was commissioned by the Department of Education, unveiled at the White House, and published by the AAC&U, asked the nation to “Reclaim and reinvest in the fundamental civic and democratic mission of schools and of all sectors within higher education” (p. vi). In the first section of the report, “Why Education for Democratic Citizenship Matters,” the authors argue that the problem of “citizen passivity” needs to be taken up (again) by our institutions of higher education as “the United States depends on a knowledgeable, public-spirited, and engaged population” (p. 2). Just as this report called on “the higher education community—its constituents and stakeholders—to embrace civic learning and democratic engagement as an undisputed educational priority for all of higher education, public and private, two-year and four-year” (p.2), Andrew Delbanco suggests in his 2012 book, *College: What it Was, is, and Should Be* that college should help students to “develop certain qualities of mind and heart requisite for reflective citizenship” (p. 3). While Delbanco looks to the past and the ways in which this mission was once at the heart of public colleges and universities, the authors of “A Crucible Moment” look at the present and call for colleges and universities to reclaim this civic mission in order to save our democracy from the problems of low voter turnout, uncivil public discourse, and distrust in government that seem to be at an all-time high.

While it is clear that these are all problems for our democracy, and that education is a key to ameliorating them, the best ways of implementing civic components into the classroom are not quite clear. According to Peter Levine (2011) in his article “What do we know about civic engagement?” there are, in fact, practices that can be harmful to either community members or to the youth practitioners attempting to engage with them. Levine cites scholars who worry that service alone can create “a distinction between the active server and the passive recipient” and studies from the book *Freedom Summer* (1988) that show students who went to Mississippi in 1964 paid for their social contributions with (some of) their psychological well-being. Thus, it is important in lower-level courses to start students off with projects that are appropriate not only for the goals of the course, but for the level of preparation and understanding of the students. Toward these ends, scholars such as Michelle Sidler look at the development of a civic focus as one that “encourages students’ investment in their own research and encourages students to become responsible ‘citizen-experts’ within their communities” (p. 49). Sidler argues that it is in such contexts that “students are conscious of the responsibility they have to readers, civic communities, and even themselves to produce accurate, reflective, and moral writing” (p. 49-50).

Description of Practices

Each presenter will describe an assignment or activity that asks students to engage in civic writing. Presenters will reflect upon their motivation for incorporating civic engagement into their course, describe how they conceptualize and prepare for the assignment or activity, and reflect upon the benefits and challenges of the assignment/activity when put into practice.

After the presentations, participants will break into partners or small groups to brainstorm for ways they might incorporate a civic-engagement component into their own courses.

The session would end with a discussion of the various approaches, definitions, and questions that emerged during the breakout session.

Questions for Discussion

We hope participants will come prepared to engage with the following questions:

- What is civic engagement?
- Why should civic engagement be a part of the college curriculum?
- How can we incorporate a civic engagement component into a mixed-major, lower level course?
- How might we foster civic engagement in courses from multiple disciplines?

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Modeling Writing Autoethnography as a Research Method and Pedagogical Tool

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Abstract: We present autoethnography as a valuable research method and pedagogical tool. Our presentation includes an explication of the literature fundamental to an understanding of this approach, as well as an overview of our individual and collective processes for employing this approach as a graduate class at Virginia Tech. We will perform a workshop of an autoethnographic writing piece, including a debriefing of the meta-process inherently part of its evolving iterations, at each phase yielding enriched understandings of the writers' experiences working with student teachers in an English as a Second Language (ESL) setting. Simultaneous with enriched understandings for each writer are the development of writing that contributes a more compelling, accurate, relevant, and rich story that contribute significantly to understandings in educational and other contexts. We will then facilitate a brief autoethnographic writing experience for session participants. Session facilitators will then lead participants through a brief writing exercise, speed peer review, and discussion of resulting understandings provided by this research and pedagogical approach. In concert with the discussion, we will reflect on the role and value of writing autoethnography as a research method and powerful tool in pedagogical settings.

Literature Review

Goodall (2008) wrote about narrative, including that in autoethnography, "as a way of knowing," and as a mechanism "for discovering meaning and communicating it to readers through stories" (p. 13). Ellis (2009) further elevated these concepts as she wrote to the value of revisiting one's autoethnographic texts as a recursive process to discover new layers of meaning in deepening contexts of experience. Poulos (2009) placed value on this process as "communicative action," resisting silence in the context of trauma and other life experience, and, on the contrary, moving toward greater awareness as a participant in life experience, scholars, and teachers (p. 17). As a graduate class at Virginia Tech, we value the potential for evolving awareness as scholars and instructors guiding other students.

Goals and Objectives

Our session goals include transmission of understanding as well as facilitation of an autoethnographic writing experience. Our specific goals are:

- To present an understanding of key literature fundamental to this approach to research and pedagogy;
- To convey a deeper understanding of this approach by modeling our collective experiences with evolving autoethnography through a workshop performance, including resulting understandings of the relevant content;
- To facilitate brief but comprehensive autoethnographic writing experiences with session participants, including an opportunity to debrief on resulting understandings; and
- To reflect on the role and value of writing autoethnography as a research method and powerful tool in teaching and learning settings.

Description of the Practice to be Exemplified

In the proposed practice session, we will work to exemplify the "communicative action" inherent in writing autoethnography (Poulos, 2009, p. 17). Through an autoethnography performance workshop and discussion of the evolution of the writing across iterations, we will demonstrate the recursive process of writing autoethnography. As part of the preceding and resultant discussion to the workshop performance, we will also convey that autoethnographies that session participants might write could be on content related to their own pivotal life events,

rich with description, reflection, emotion, and contextualized within content-specific literature. Such content may stem from traditional teaching and learning settings, or other kinds of educative settings, such as health care training contexts, as well as personally relevant contexts that may impact an individual's broader experience across contexts, personal and professional. For example, how does one's personal story impact how one interacts with students or patients? We will then facilitate a brief process of such writing, including free writing, brief peer review, reflection and discussion. Discussion will include greater depth on the relevance and possible applications of autoethnography for teaching and learning settings. Session facilitators will be prepared to discuss, for example, how one might incorporate autoethnography in curriculum for pre-service teachers so that they can attain reflexivity in the classroom, crucial for establishing empathy in K-12 settings.

Discussion

Goodall (2008) reflected that we, as individuals and as a society, are not sufficiently moved by traditional academic writing. Recursive understanding of such writing's contextual and dynamic meaning is often missing. As scholars and instructors, we would like to bring the deep introspection and meaning-rich method of autoethnography to bear both on our research and in our pedagogy.

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Library Resources, Copyright, and Open Source Materials or How to Use Free Stuff and Still Cover Your ... Assets

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Abstract: As the nature of the classroom has evolved to become more digital, so have many of the resources provided by the library. What has not kept up with these changes is the awareness of the students and faculty about these resources. Online tutorials, libguides, direct linking to articles and citation formatters are just some of the digital services available for classes which may help the instructor support the students' success. However, the changes in the resources have brought new and modified problems, notably, the issue of copyright. With different ways of accessing and disseminating materials come new pitfalls for instructors and institutions to avoid. The availability of information is also changing with the development of more open source textbooks and journals. These can become resources that instructors and students can draw upon. During the presentation, participants will be asked to discuss their use of online library resources and how they can better support their students through these services. Copyright case studies will also be presented with a discussion of how to use library resources without violating copyright. Finally, the use of open source material will be discussed and evaluated.

Literature Review

One of the core needs for any college or university is access to information. The library has traditionally provided the resources that allow this access through books, journals, and numerous other methods. As classes move more and more online (either completely or partially), this access has, by necessity, changed. Traditional services may not work well or may not meet the students' needs in the online environment (Thomsett-Scott & May, 2009). With these changes in the services and their context of use, there arise new problems, such as the issue of copyright in a digital medium, and new possibilities, like open source textbooks and journals. All of these changes must be understood to effectively support student success.

One significant problem facing the use of online library resources is that students do not know how to use these resources. What is worse is that many faculty members are also not aware of the services available online and, therefore, do not include them in the course website or point their students in the right direction (Lawrence, 2006; Shell et al., 2010; Thomsett-Scott & May, 2009). Things like online tutorials, libguides, direct linking to articles, ways to communicate directly with librarians, citation formatters, and so forth are all services available to the students and faculty if they know to use them.

With these resources also come problems that must be dealt with. Copyright issues may be one of the more confusing problems that this generates. For instance, is it acceptable to upload a copy of an article as a pdf to a course management system or should there just be a link to the source? What about using a YouTube video? There are many aspects to consider to protect yourself (Dames, 2010; Seadle, 2006). These questions get even more complicated when you consider the nature of the internet and that the online course material may not be restricted to a single country, so there may be multiple sets of laws to deal with. This is a tricky topic and not understanding it may mean that students do not get access to a resource they could have used or the instructor might be inviting litigation because of inappropriate use.

As a counterpoint to the issues of copyright is the idea of open source textbooks and journals. This topic has received a lot of press recently as a way to reduce the financial burden on students (Schwartz, 2012; Wukman, 2012). It can also be seen as a way to widen participation in education and promote life-long learning (Bradwell, 2009). At the same time, there are questions to be answered about who will control the quality and content of the materials. Other issues, like whether contributing to an open source book or journal is as prestigious as publishing in a traditional venue, may be of specific interest to faculty members.

Goals and Objectives

Upon completing this session, participants will be able to:

- Recognize the opportunities and problems integrating library resources in online learning
- Describe how online library materials can be used to support student success
- Recognize potential copyright issues in online learning
- Explore open source e-textbooks
- Discuss the advantages/disadvantages of open source journals and textbooks

Description of Practice

During the session, participants will explore the opportunities and challenges of using library resources in their online courses. The presenters will introduce various online resources such as libguides, online tutorials, resources for APA and MLA citation styles, etc. Participants will examine copyright case studies and discuss copyright issues in online learning. Participants will discuss the use of open source e-textbooks and other resources.

Discussion

The discussion will focus on how to effectively use library resources in a variety of disciplines. Participants will be encouraged to discuss the why and how of incorporating online library resources into their courses without violating copyright. Participants will evaluate alternate scholarly textbooks and journals. Discussion will also encourage participants to examine their own institutions' resources and share those with the group.

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Innovation in Teaching and Technology: Designing a Faculty Development Initiative in Higher Education

Lloyd P. Rieber, Brandy Walker, & Larry McCalla, *Learning, Design, and Technology, The University of Georgia*

Abstract: In this presentation we will discuss an initiative begun in 2011 at the University of Georgia's College of Education. The initiative focuses on promoting greater attention on innovation in college-level teaching, while taking full advantage of the affordances of technology. As one of the nation's largest and most diverse colleges of education, the initiative faces challenges in engaging faculty in systemic change while also identifying signature themes that enhance and extend the college's teaching mission.

Overview of the Initiative

The Innovation in Teaching and Technology (ITT) initiative at the University of Georgia's College of Education was begun to develop and promote greater attention on innovation in college-level teaching, while taking full advantages of the affordances of technology. The initiative is interested in how innovation can be part of the learning experiences through instructional systems focused on teaching and technology, as well as the administrative systems that support the instructional systems. Through this initiative, the College of Education has taken initial steps toward a comprehensive and systematic understanding of innovation and change within this public institution of higher education. This, in turn, is a response to larger changes in global expectations for education.

This initiative seeks out examples of innovation from all levels of teaching and technology use, from faculty and students, to staff and administration. A fundamental assumption of this initiative is that innovation, even in the smallest increments, is valuable and contributes to the mission of the College. In this sense, innovation is a very relative and personal phenomenon: What is innovative for one person may not be so for another. Similarly, a small innovation for one person can be a dramatic innovation for another. The ITT initiative works to establish and foster a spirit of innovation within the College that recognizes and encourages all forms of innovation, large or small. In addition, staff associated with the initiative have begun to conduct research on what stakeholders in the College of Education consider as a need for innovation, how they define innovation, as well as their views specifically on how innovation in teaching and technology can and should influence our scholarship and service in the College and beyond to the larger field of education.

Many activities or programs have been offered through the initiative:

- Innovation 20/20 Seminars: The purpose of these seminars is to showcase teaching innovations within the college.
- The Discovery Seminars: The purpose of these seminars is to describe research-based innovative approaches to teaching and learning.
- ITT Faculty Academy: A series of intensive 3-hour sessions is provided to selected faculty who identify and work on a project for improving their classroom teaching; faculty then share their completed projects with other faculty and agree to act as mentors.
- ITT Book Club: Participating faculty select and read one book related to the intersection of innovation, teaching, and technology, then meet to discuss the book and its implications.

Why this Initiative is Needed

Several emerging trends and challenges in higher education deserve special attention by colleges of education (Johnson, Levine, Smith, & Stone, 2010). The way colleges and universities prepare students for their future professional lives is changing with a need for increased focus on critical inquiry, mental flexibility, and collaborative problem-solving within authentic social situations. Students need advanced digital media literacy skills to successfully meet these challenges. Faculty within colleges of education need to develop a plan to meet the challenges and opportunities presented by technologies that will have significant impact within the next 12 to 24 months, such as online learning, mobile technologies and the development and use of open content. Similarly, higher education needs to remain flexible to adapt to technologies predicted to have an impact two to five years from now, such as electronic books, simple augmented reality, and gesture-based computing.

The 2010 National Educational Technology Plan (U.S. Department of Education, 2010) outlines five specific objectives to meet of President Obama's two broad goals to increase the percentage of college graduates, and to close the achievement gap among k-12 students by leveraging the learning sciences and technology. Of these, two are particularly relevant to this initiative:

- All learners will have engaging and empowering learning experiences both in and outside of school that prepare them to be active, creative, knowledgeable, and ethical participants in our globally networked society.
- Professional educators will be supported individually and in teams by technology that connects them to data, content, resources, expertise, and learning experiences that enable and inspire more effective teaching for all learners.

The College of Education at UGA is well positioned to become a leader at the state and national level in demonstrating innovative teaching practices to meet both of these objectives. Documenting and presenting our efforts at this early stage of the initiative should be of interest to AECT members.

Impact of the Initiative

Realistically, the College of Education only has an indirect and modest influence on the rate at which public school systems, especially those in Georgia, change to embrace 21st century learning models and other national trends. However, we can expect more control over the teaching that goes on within the College, and we should embrace the opportunity to model these practices within our own classrooms. Moreover, an initiative such as this, originating from a large public institution of higher education, has the potential to make substantial contributions to scholarship and discussions concerning the process of innovation and systemic changes in large-scale organizations.

The initiative is not only a resource for the faculty and students of the College of Education, but also serves the broader field of Education and professional organizations interested in research on innovation in teaching and technology. In addition, research is being conducted on the nature of the initiative itself as an innovation within larger academic structures. We look forward to using this presentation and discussion time to share our preliminary findings and begin ongoing conversations about successful systemic change for public education through innovation, teaching, and technology.

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Culturally Appropriate Online Learning: A Multifaceted Challenge

Andrea Edmundson, *the Global eLearning Community*

Abstract: As universities expand their reach into other countries via elearning, the likelihood of a clash of cultures exponentially increases. Yet, instructors may not recognize that certain participant behaviors (reluctance to participate, perceived lack of problem-solving skills, high dependence on the instructor and structure, etc.) are manifestations of cultural differences. They may also be unaware of how long-distance students struggle with courses developed in another culture. In addition, unlike vociferous Americans, participants from many cultures will not reveal their challenges or express frustration to the instructor. ELearning courses are *cultural artifacts*, embedded with the cultural values, preferences, characteristics, and nuances of the culture that designed them, inherently creating challenges for learners in cultures other than the one that designed the courses. In this session, participants will learn to recognize symptoms and behaviors of the challenges faced by non-American students in U.S.-designed elearning courses. Subsequently, they will learn how to promote 'equitable learning outcomes' for students (i.e., all students expend the same amount of effort and time to successfully pass a course) by adapting content, language, media, technology, and instructional methods to meet the cultural preferences and needs of students in other countries.

Literature Review

The term *globalization* gained currency in the 1970s as Western corporations rapidly expanded into other parts of the world (Jarvis, 2002), accelerating cross-cultural exchanges (Walker & Dimmock, 2002). Industrial anthropologists (Hall, 1981; Hofstede, 1984; Trompenaars & Hampden-Turner, 1998) have identified variations of *national cultural dimensions*—categories of characteristics across which cultures can be compared and contrasted. Such differences, for example, affect how members of a culture communicate, accept the distribution of power, perceive time, or view themselves in relation to the environment. As online learning options proliferate and globalization continues, an expanding audience of learners is more likely to encounter courses created by another culture. All learning materials are *cultural artifacts*, imbedded with the values, cultural characteristics, and preferences of their designers. However, research indicates that to ensure that learners in other cultures or countries achieve equitable learning outcomes, learning materials will need varying degrees of cultural adaptation.

Ten years ago, most online courses were designed in Western cultures; while the largest and fastest-growing consumer groups lived in Eastern cultures such as China, Japan, and India (Van Dam & Rogers, 2002). This trend continues in 2012, with many higher education institutions having branch campuses abroad (Sharma, 2012) and offering online courses to non-U.S. learners, especially for China (McMurtrie, 2011). When Edmundson (2005) published, "The Cross-Cultural Dimensions in Globalized eLearning," few studies – empirical or experimental – could be found on the topic. Since then, the scope and depth of information available to online educators has expanded significantly. In three books published by Edmundson (2007, 2011, 2013), educators (academics, researchers, corporate trainers) and learners share their experiences and research results so that international educators can more effectively meet the needs of an expanding international audience.

Methodology

In this session, Dr. Andrea Edmundson (President of the Global eLearning Community), will build on a synopsis of research results, student feedback, instructor testimonials, and professional expertise to illustrate how instructors can modify in their courses to accommodate the cultural preferences and needs of non-U.S. students. She will frame the discussion around the Cultural Adaptation Process (CAP) Model (see Figure 1). The CAP Model allows instructors – with little or no cultural expertise - to systematically identify and prioritize cultural adaptations that are critical to students' achievement of equitable learning outcomes. Using a case study presented by Dr. Edmundson, participants will offer potential adaptations to 10 culturally based challenges in the online environment.

By the end of the session, participants will be able to:

1. Identify cultural differences that manifest as challenges in elearning environments
2. Use the CAP Model to determine what needs to be modified

- Propose at least 10 culturally appropriate course adaptations, based on variations in content, language, media, technology, and instructional methods.

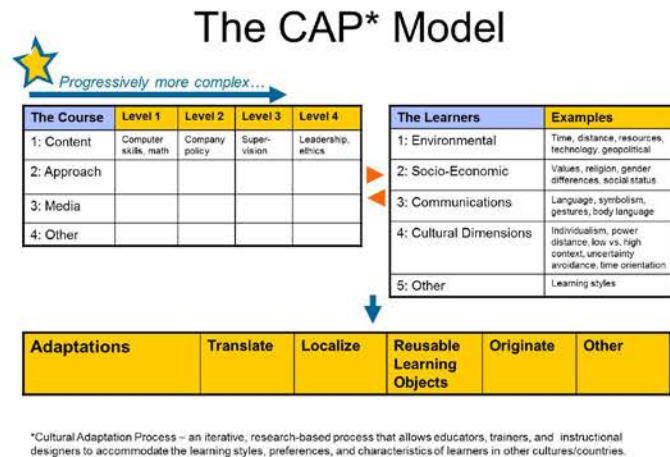


Figure 1. The cultural adaptation process model (Edmundson, 2005)

Discussion

Since the session is brief, I will use the research studies and experiences compiled in my three edited books on the impact of cultural differences on the educational environment. This information supports the proffered solutions to cultural challenges in the online environment that we will describe in this session. As part of my doctoral research, I generated the Cultural Adaptation Process (CAP) Model, which has proven to work well as a tool to guide educators and instructional designers on identifying potential cultural issues, prioritizing their criticality to achieving equitable learning outcomes, and proposing and testing modifications, when the educator has minimal cultural knowledge.

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Popularity vs. Pedagogy: What Do We Know about ePortfolio?

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Abstract: In recent years, the use of ePortfolios within the context of higher education has flourished. Instructors are using them in individual courses, and many institutions are launching ePortfolio programs that will follow students from their freshmen year through to graduation. Theories of human learning have been used to advocate for this approach, and proponents argue that the use of ePortfolios can both promote and demonstrate learning. With all of the time and resources currently being devoted to the use of ePortfolios, it becomes imperative that educational researchers turn a critical eye to this technique—popularity alone does not make a sound pedagogical tool. In this review, we examine the current state of the research on ePortfolios to determine whether the important questions are being answered, and what questions remain to be asked. An analysis of 79 articles revealed a focus on advocating for the use of ePortfolios and empirical studies presenting data on students' and instructors' affective perceptions of ePortfolios.

Literature Review

The eventual adoption of electronic portfolios into the realm of education makes theoretical sense, given what we know of human learning. Theoretical arguments for the use of ePortfolios have cited improved reflection, increased student engagement, improved learning outcomes, and increased integration of knowledge (Acosta & Liu, 2006; Doig, Illsley, McLuckie, & Parsons, 2006; Hartnell-Young, 2006; Heinrich, Bhattacharya, & Rayud, 2007; Jenson, 2011; O'Brien, 2006; Peet et al., 2011; Riedinger, 2006; Sherman, 2006). The electronic nature of ePortfolios allows even more flexibility and fluidity than their traditional paper-based counterpart, which opens the door for a more streamlined, iterative reflection process. Students can easily document their reflective process and witness their own growth over time (Doig et al., 2006; Riedinger, 2006). Reflection can also be encouraged through a specific ePortfolio interface, which can be designed to address the reflective needs of the students according to their experience level and academic domain (Doig et al., 2006). Instructors can use ePortfolios to shift the locus of control from teacher to student, thereby nurturing student engagement (Acosta & Liu, 2006). When students incorporate artifacts from multiple disciplines and are asked to synthesize and reflect on them, ePortfolios can become a vehicle for developing integrative knowledge skills (Peet et al., 2011). All of these factors combined can provide students with a method to construct their own knowledge and skills, which is likely to lead to deeper levels of understanding and improved learning outcomes (O'Brien, 2006).

Although the theoretical foundation for the use of ePortfolios is strong, it is not sufficient to justify widespread use. As ePortfolio use continues to grow, and valuable time and resources are being invested in this fairly new pedagogical tool, it becomes even more important that we have empirically-based evidence for its adoption. In this session, we will present an overview of the current ePortfolio research and the methodology employed within it to discuss whether the necessary evidence exists to make an informed judgment on this tool.

Methodology

In an effort to layout the current landscape of ePortfolio research, we reviewed a sample of 79 peer-reviewed articles on ePortfolios. Articles for this review were located first through keyword searches, and secondly through citations of previously-located articles. Of the total number of articles located, 41 were empirical in nature (52% of the sample), meaning that original data on the use of ePortfolios in a specific context was collected and presented. Thirty-eight of the articles (48% of the sample) were descriptive in nature, or practice-oriented. These articles focused on arguing for the use of ePortfolios in education or describing processes of a specific instance of ePortfolio use, often including suggestions for the successful development and implementation of an ePortfolio program, either at the classroom or university level. Dates of publication ranged from 1994 to 2011, with the bulk of the research published in 2008 (20%).

Many of the description/practice articles from the sample gave detailed accounts of the experiences of individuals or institutions when implementing ePortfolio programs. Also included in this category were the articles that made structural or theoretical arguments for ePortfolios. Many cite the need to develop new methods of assessment, address decreasing levels of student engagement, and help students become adaptive problem-solvers.

The empirical articles we reviewed in this sample generally fell into two categories: those assessing attitudes and perceptions (30 articles), and those assessing learning outcomes (11 articles). The second category, empirical articles measuring learning outcomes, comprised 27% of the empirical articles and only 14% of the total sample. Within these articles the researchers investigated a variety of learning outcomes within the context of ePortfolio use, including students' writing ability, reflective ability, knowledge attainment and integration, and engagement. Compared to the attitudes and perceptions category, a wider range of methods were used to collect and analyze the data, such as rubrics, case studies, questionnaires, and interviews.

Results and Discussion

Descriptions of individual or specific experiences with a specific pedagogical tool, in this case ePortfolios, serve an important function in the literature. Arguably, in many cases where a new technology or tool is beginning to emerge, these articles are usually the seed from which more rigorous research germinates: as these articles make ePortfolios more prevalent, other researchers undertake the more demanding task of presenting data on ePortfolios and desired outcomes. They do not illustrate whether the theoretical underpinnings of ePortfolio use are sound. For this, a shift in the research must take place. It is promising that such a high percentage of the articles located discuss data that was collected first hand. This review suggests that ePortfolio research has made the shift successfully from a focus on descriptions of practice and theoretical arguments to a focus on data collection and presentation. Despite making this crucial step, however, within the realm of empirical articles, the focus remains on the attitudes and the perceptions of the instructors and students using ePortfolios.

Empirical evidence grounded in learning theory for the adoption of ePortfolios becomes increasingly important as use continues to grow. Evidence suggests that ePortfolio use at the post-secondary level has tripled since 2003, and a little more than 50% of public colleges and public and private universities make some use of ePortfolios (Clark & Eynon, 2009). This requires another shift in the research: from data focused on attitudes and perceptions to investigating the link between ePortfolios and learning outcomes. Future studies should focus more on students' development of reflective skills, critical thinking skills, deeper levels of learning, and student engagement in the context of ePortfolios. More information is needed regarding ePortfolio's impact on integration of knowledge and metacognitive awareness. One glaring issue with the current literature is that there is rarely a comparison or control group; as a result, it is difficult to determine whether learning occurred because of the ePortfolios or because of the general structure of the class. Researchers should begin to compare ePortfolio use to non-ePortfolio use within separate sections of the same course in order to parse out the specific contributions of the tool. Finally, the adoption of institution-wide ePortfolio systems that will follow students from their freshman year to graduation provide a new opportunity for researchers: longitudinal studies that look at differences between ePortfolio and non-ePortfolio users over the course of several years could provide useful information on potential benefits once students become sufficiently acclimated to the ePortfolio process.

The current literature suggests that ePortfolios can plausibly make great contributions to students' learning when they are properly implemented. However, there are still substantial gaps in the literature, and the adoption of ePortfolios is set to out-pace our knowledge of its effectiveness and appropriate use. It is time for the research to make this crucial shift so that ePortfolios can either attain their full potential, or valuable time and resources can be allocated to a more worthy cause.

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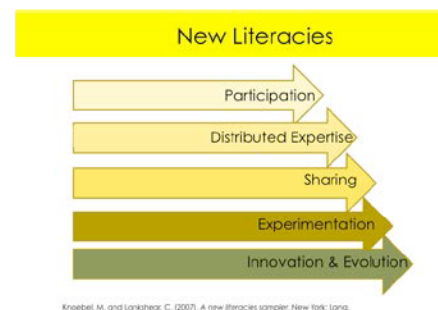
Digital Internships: Examining Preservice Teacher's Inquiry Practice in Online Responses

Katie Dredger & Jenny Martin *Department of Teaching and Learning, Virginia Tech*
Susanne Nobles, *English Department, Fredericksburg Academy*

Abstract: This qualitative analysis explores preservice teacher responses and dialogue on poetic master techniques in a digital internship wiki. Seven teacher candidates, 6 females and 1 male, studied in multiple text forms, modes and media with 19 ninth-grade English Language Arts students, 7 females and 12 males. As defined by Reich, Murdane, and Willett (2012) this course wiki falls into only 1% of the educational wikis studied using the WQI, in that it houses both “individual student assignments and portfolios” and “collaboratively created multimedia student presentations” (p. 13). The preliminary findings of the written discourse analysis show themes of student skills development in the areas of information consumption, student participation, expert thinking, New Media Literacy, and complex communication.

Background

Preparing students for 21st Century Literacies (Kress, 2003) means modeling ways that geographically, distant colleagues can collaboratively construct knowledge in digital ways. Dewey (1938) shares that real student understanding comes from individual knowledge construction. Cognitive Flexibility Theory (Spiro, Coulson, Feltovich, & Anderson (2004) suggests that learners gain enduring understandings when material is presented in many ways and in multi-modes. Researchers in Multiliteracies (New London Group, 1996) suggest that classroom teachers harness the power of Web 2.0 and 3.0 (mobile) technologies in order to meet students in learning spaces that are familiar to them, such as social networking spaces. Secondary teachers have shared that students are engaged when New Literacies (Kist, 2005) offer them spaces to collaborate and create to meet individual learning needs (Kajder, 2010; Richardson, 2009).



Differentiated classrooms (Tomlinson, 2001) allow individualized learning environments that create both familiar learning spaces (Dredger, Woods, Beach, & Sagstetter, 2010; Moll & Greenberg, 1990) and move students in new directions for essential growth in content skills.

Methodology

With IRB approval and participants' consent (including parents of minors), the researchers used the written interactions between preservice teachers and ninth-grade students in a Wikispaces poetry wiki. This wiki became the space for the digital internship that garnered each university student ten internship hours and support from the geographically distant mentor. The researchers were then able, with revision history and student pages, to analyze the nature of the written text shared in this unique space using written discourse analysis (Goldman & Wiley, 2004). Data collection was in the form of the text typed into the wiki in the teacher and student created pages and the comments supplied by both the secondary students and the preservice teachers. Data also were collected in the form of written feedback on the process by the preservice teacher and secondary students. This written discourse analysis analyzed in light of the Wiki Quality Instrument (Reich, Murdane, Willett, 2012) revealed the themes that confirmed higher level thinking skills (create, evaluate, analyze) according to Bloome's Revised Taxonomy (Hoffman, 2012).

Results

As defined by Reich, Murdane, and Willett (2012) this course wiki falls into only 1% of the educational wikis studied using the WQI, in that it houses both “individual student assignments and portfolios” and “collaboratively created multimedia student presentations” (p. 13). Reich, Murnane, and Willett consider such a wiki to be a promising “learning environment that can prepare students for publishing and collaborative problem solving in a networked age” (p. 13). Still, this research corroborates theirs, as the socioeconomic status of the students in the school (NCES, 2012) indicates that these families are economically privileged in comparison to others in the country. The preliminary findings of the written discourse analysis show emerging themes: information

consumption, student participation, expert thinking, New Media Literacy, and complex communication. Some of the examples from the wiki include the following interaction that showed growth with New Media Literacy in the wiki and how both the preservice teacher and the ninth graders were learning together.

Preservice teacher: "I also wanted to write a short message to apologize for not commenting on your wiki posts earlier. I was very confused; I was looking for your posts in the wrong spot and thought that you just hadn't posted yet! Thank you for being patient with me."

Student responded: "it's okay for the delay in comments. I didn't exactly understand how the Wikis worked either, but as you probably know I was delayed in posting a second, original poem I wrote. No worries!" This following example shows the mentoring toward expert thinking. Ms. Peni (a pseudonym) suggested "The Journey" by Mary Oliver to a ninth- grade student saying "In college I had some of my poetry professors saying things like, 'sometimes stating the obvious just drags the poem out.'"

Preservice teachers also gave specific praise to students in the encouragement of expert thinking. One wrote, "I liked your syntax, specifically in the line: 'It flew down swiftly, the bat.'"

Discussion

This model of a digital internship for preservice teachers shows that partnerships between K-12 schools and universities do not have to be relegated to those schools in close proximity to university teacher preparation programs. This also is a real world way to show preservice teachers that digital writing and collaborating are happening in K-12 schools, and that these ideas are not just educational theory. Instead of having preservice teachers doubt that they could embed technology in their classrooms, this research shows an actual place where it is happening, and mentoring them as they experience it for themselves. The preservice teachers report satisfaction with the experience; the classroom-based mentor teachers benefit from more academic support for their students and a voice from the university that corroborates their own notions of complex communication; and the secondary students reported enjoying their interactions and benefitting academically from the feedback the college students gave them.

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Wednesday

February 6, 2013

Poster Session A

12:00-1:30 PM

<http://www.cider.vt.edu/conference/>

A Content Analysis of Research Articles about the Recruitment and Retention of Women

Thomas Long

The field of engineering has been dominated by an unbalanced proportion of males for as long as data has been formally collected (Beede, 2011). In August 2011, the U.S. Department of Commerce reported that women make up less than 25% of STEM professionals in an Executive Summary entitled “Women in STEM: A Gender Gap to Innovation”. Many professional associations, such as the Society of Women Engineers and Women’s Engineering Society have been formed to provide support in recruiting and retaining women in the field of engineering, yet the question still remains, why are women not entering the engineering field at the rate of their male counterparts?

A content analysis was conducted in two phases. A census population database of research-based articles (N=33), pertaining to women in STEM fields from the Journal of Women and Minorities in Science and Engineering (JWMSE) was collected using a deductive coding frame. These articles were separated by three publication time frames (1995-1999), (2000-2004), and (2005-2009). The database was used to identify the root causes of the lack of recruitment and retention of women in engineering over the three time periods. A constant comparative method, as described by Glaser in his article “The Constant Comparative Method of Qualitative Analysis” (pp.436-445, 1965), was utilized as sub-codes emerged and themes began to form to ensure that the data was grounded in the literature that was examined.

Results of the statistical analysis revealed that the number of articles about recruiting and retention have increased steadily from 1995-2009, however this change is not significant ($F = .433, p > .05$) with a small effect size (partial eta squared = .162). The root causes the authors presented have significantly changed over time, as has the focus on recruiting and retaining women in the field of engineering.

A Journey Through Disciplinary Pedagogy: Translating Research into Instructional Practice (TRIP)

Marlene M. Preston & Brandi Quesenberry
Department of Communication, Virginia Tech

Across disciplines, faculty are challenged to adequately prepare graduate students to teach. In many cases the GTAs become competent to deliver lessons and to evaluate student knowledge, but they may not have the time or the direction to consider the research on teaching that has been created by faculty in their discipline. This "journey through disciplinary pedagogy" is one that faculty and students in any discipline might make to enhance the GTA preparation for teaching. Translating Research into Instructional Practice (TRIP) is an initiative by the National Communication Association, designed to collect and feature articles by communication scholars who have conducted research on their teaching. At VT, this resource is being used to help GTAs connect the research of the discipline with their own teaching. Graduate students enrolled in Communication Pedagogy have always studied the intersection of theory and practice, but in this iteration of the course, they are challenged to identify theory-based practices, plan implementation, and reflect on the efficacy of the practice. They choose theory and practice with one faculty member in the pedagogy course; then they implement their new strategies under the guidance of another faculty member in a Teaching Practicum. GTAs select from a variety of TRIP concepts--such as instructor clarity, credibility, and immediacy--to enhance their own performance and student learning in their classrooms. GTA perceptions of increased student and teacher efficacy are shared in the Teaching Practicum; the strategies are also evaluated through reflection and class discussions. The TRIP model allows graduate students to make informed decisions about pedagogy and to begin the habit of experimenting with and reflecting on those practices. Faculty and students in any discipline might share this journey across courses, through the literature of disciplinary pedagogy, and into the classroom.

A Strategy to Lessen University Classroom Non-attendance and its Impact on Student Performance

Kevin Ayers & Kathleen Poole, *Exercise Sport and Health Education, Radford University*

Abstract: Non-attendance at universities by students has been cited in the literature as a growing concern (Gump, 2006; McCarey, Barr, & Rattray, 2006). Many explanations have been offered as reasons for non-attendance. Some researches point out that few codifying policies exist at colleges and universities regarding attendance (Cohn and Johnson, 2006). University culture is deemed an autonomous experience where students are given the freedom to make decisions and develop into adults. Student centered factors also may play a role in non-attendance and include both legitimate and nonlegitimate reasons. Irrespective of the reasons behind non-attendance, most of the literature shows a direct causal link to non-attendance and poor academic outcomes (Massingham and Herrington, 2006). This study examined strategies to lessen non-attendance and improve overall academic performance. Students, N=896, in three different classes over a five year period were studied. All classes had the exact same attendance policy imposed and communicated clearly by the instructor. Negative consequences for non-attendance was published in the course syllabus and discussed in class. There was a positive correlation to non-attendance and final grades when the number of missed classes exceeded three. Failure rates were drastically higher for students missing more than five classes. A positive reinforcement strategy (PRS), extra credit for perfect attendance, had a mild positive impact on nonattendance and academic performance. PRS and the introduction of name tags with attendance recorded on the inside of the tag resulted in a significant decrease in non-attendance and improved academic performance. The last strategy resulted in greater than 50% of the students having perfect attendance for the semester. Although other mitigating circumstances could have accounted for the drastic decrease in non-attendance strategies to improve student attendance are worth exploring.

Achieving Health Equity Through Centers of Teaching Excellence

Michelle Quinteros, *Hispanic-Serving Health Professions Schools*
Darrell Burrell, *Bellevue University*

Underrepresented (URM) minority graduate and doctoral health degree students need to learn how to teach in order to recruit, engage, and retain the next generation of health professionals to achieve health equity. Evidence also indicates that increasing diversity among health professionals is associated with “better educational experiences for health professions students¹”. If that is the case, why aren’t institutions placing equal emphasizes on pedagogy as in research skills? The number of URM health degree students completing post-graduate degrees and the number of those who have become faculty members has remained consistent throughout the past 10 years, a number that has increased compared to non-white Hispanics. In 2002, for example, 959 Hispanic medical students graduated nationwide including Puerto Rico, accounting for 6%² of total graduates of that year. Increasing by only 2% in 2011, 1,336³ Hispanic medical students graduated across the country. Similar trends can be seen among Hispanic medical faculty where 4% representation has been constant over the past ten years⁴. Some institutions, like American University, have taken steps to addressing this issue. These institutions have centers for pedagogy that have been imbedded into doctoral studies to ensure that the students are not only able to conduct research, but can also train the next generation of scholars. This presentation will focus on the importance of developing a pedagogy program for doctoral students as part of their course requirements and how to effectively integrate it into studies to increase diversity in the health professions and achieve health equity.

¹ National Academy of Sciences, Board on Health Sciences Policy. *In the Nation's Compelling Interest: Ensuring Diversity in the Health Care Workforce. Executive Summary.*

² American Association of Medical Colleges (AAMC) (2011). Table 29: Total U.S. Medical School Graduates by Race and Ethnicity within Sex, 2002-2011. Retrieved on October 1, 2012, from <https://www.aamc.org/download/147312/data/table29-gradsraceeth0211.pdf>

³ American Association of Medical Colleges (AAMC) (2011). Table 30: Total Graduates by U.S. Medical School and Race and Ethnicity, 2011. Retrieved on October 1, 2012, from <https://www.aamc.org/download/145668/data/table30-gradsschlraceeth2011.pdf>

⁴ American Association of Medical Colleges (AAMC) (2011). Table 15: Distribution of U.S. Medical School Faculty by Sex, Race/Hispanic Origin, Rank, and Tenure Status. Retrieved on October 1, 2012, from <https://www.aamc.org/download/271932/data/11table15.pdf>

Adapting Feminist Pedagogy to an Online Course

Diane M. Hodge, *School of Social Work, Radford University*

Adapting feminist pedagogy to an online course can pose many challenges, most notably a perceived lack of tools and techniques that are congruent with feminist pedagogical principles (Glass, 2012). In actual practice, there are many ways to bring feminist pedagogy to online education (Chick & Hassel, 2009). This poster will provide several ways in which feminist principles can be translated to online instruction, and will demonstrate how feminist pedagogy can, in fact, drive the use of available technology (Klebesadel and Kempfert, 2004). Feminist pedagogy consists of several basic principles that include: Raising student's consciousness of social conditions and oppression, involving students in their own learning, self-reflecting on new information, collaborating in the generation of knowledge, breaking down bias, and effecting social change (Lai & Lu, 2009). In the development of a new online course for graduate students, these feminist pedagogical principles drove the tools and techniques used for designing the class. For example, providing readings about oppressed groups helped to raise student consciousness, but to move that conscious-raising to self-reflection, all readings required a brief journaling of how the student viewed the material. Those journals were provided in a drop box for faculty feedback. Another example is the use of a discussion board for collaborative learning and breaking down bias. In this exercise, students were required to locate and provide timely news articles based on pre-agreed topics for their colleagues to comment on, while the student posters moderated the discussion to facilitate learning of different views and recognizing of biases. Additional feminist pedagogical principles and how they can be translated into online education will also be provided. An analysis of student work along with student feedback of the process and outcomes demonstrate the effectiveness of feminist pedagogy with online instruction.

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Addressing Interdisciplinary Science Understanding Through On-Campus Collaboration

Matthew C. Fleenor, *Physics, Roanoke College*
Matthew Rearick, *Biomechanics, Roanoke College*
DorothyBelle Poli, *Biology, Roanoke College*

We present a multi-modal model for interdisciplinary science coursework built around on-campus, faculty collaboration. While they did not elicit significant shifts in immediate learning outcomes (exam scores), courses did demonstrate gains in student engagement and motivation. For example, approximately 90% of the enrolled students answered "much" or "much more" on five different questions pertaining to interdisciplinary connections within the course ($x = 4.5/5.0$, $N = 36$). Moreover, the collaboration enhanced creative opportunities and expanded professional development for participating faculty members. Here, we present the course model and discuss several interdisciplinary and novel features, as well as discuss helpful strategies for beginning on-campus interdisciplinary collaboration related to course development. Participants will collect resources related to interdisciplinary course development, brainstorm and share their own discipline-specific ideas, and begin a network plan for on-campus collaboration.

**Exploring Immigrant Farming Programs and Social Capital:
An Innovative Approach to Program Assessment**

Lisa S. Hightower, *Agricultural and Extension Education Department, Virginia Tech*

African immigrants in the United States experience immense challenges in the form of poverty, unemployment, depression, and post-traumatic stress disorder. In addition, limited English language proficiency often restricts the ability of African immigrants to find employment. One strategy used by community development organizations to address these challenges is the development of farm entry programs aimed specifically to assist immigrants in building and sustaining farming operations in the United States. These programs provide a supportive foundation for immigrants communities to gain access to suitable farmland, hands-on training, and markets. Returning to farming provides African immigrants with a series of benefits including supplemental income, food security, social integration, and for many a connection to their agrarian roots. Drawing upon social capital theory, this study offers a novel approach to measure the community and economic development outcomes of beginning farmer programs that target immigrants. In this study, farmer programs are analyzed as social networks that connect immigrants to technical training, farming resources, and community members who provide access to markets. Social capital factors such as trust and reciprocity, social networks and ties, and agency are measured within each program, as well as the impact of these factors on the economic, physical, and social well-being of the program participants and their communities. Data were collected through a national survey of 112 agricultural educators working with immigrant farming programs across the United States. Regression models were conducted to determine the social capital factors that predict the well-being outcomes that occur through the programs. The models show that 1) interaction with organizations outside of the program, and 2) access to information are significant predictors of well-being outcomes of programs. A discussion will be offered of recommendations adult educators and community development practitioners of how best to structure farming programs that provide social benefits to immigrant participants.

**An Integrative Literature Review on International Student Access
and Success Issues in Postsecondary Education**

Xi Yu

This study focuses on learning activities and assistance for international students in US classrooms who are usually underrepresented on campus. Recommendations on better serving international students for their professional and personal success are provided. First, this study presents findings from an integrative review on international student from a student development perspective, including student development theoretical applications, international student recruitment and enrollment practices, barriers and challenges of academic success, career decision-making, and other related student learning and development issues. Next, it provides strategies of effective interactions and services for international students for faculty and related staff, including various aspects of best practices, communication style differences, cultural transition, and intercultural awareness and competency. This study particularly informs thinking and research on better understanding and serving international student or multicultural background and underrepresented students in general; also brings in thinking and attentions on how to expand both international student and American student strengths and potentials to internationalize campus.

Analysis of Listening Preferences of Hospitality Management Students

Tammie J. Kaufman, *University of Central Florida*

The objective of this research is to determine listening preferences of hospitality management utilizing Watson and Barkers' listening preference scale. A study which uncovers the listening preferences of the students will assist the faculty in better understanding the students and aid in their lesson preparation. Students spend hours in our classrooms and professors assume that they are hearing what they are conveying and are processing the information. There has been research conducted on how students learn, but often how they listen can be overlooked. We spend 42-60% of our time listening and research indicates there are four different listening

preferences. Recognizing these differences and teaching to all four types may be an effective way to organize a lecture and it will also give the students the opportunity to better understand the type of listeners they happen to be. Hospitality students in particular have to be prepared for a career in which listening is an essential skill set. This is also an opportunity to educate the student in types of listening preferences so they may better lead employees and serve the guests. It is logical that the hospitality students are more people orientated listeners because of their chosen profession. However, there were four significant relationships that showed differences between males and females relating to areas where males showed more action, technical, and content oriented listener style characteristics. Professors should take from this that although the global audience is people orientated there are intricacies present and other methods should be used in a hospitality management classroom. If not the entire audience may be missed because the professor is teaching to the global audience.

Assessing Culturally Responsive Classroom Management Self-Efficacy

S. Michael Putman, *Reading and Elementary Education Department, University of North Carolina at Charlotte*

This proposal seeks to provide information on two studies conducted to examine culturally responsive classroom management self-efficacy. The first study was directed towards the development and validation of the Culturally Responsive Classroom Management Self-Efficacy scale. Statistical analyses of the instrument suggested that it consisted of one factor, demonstrated construct validity, and was highly reliable. The second study, currently ongoing, is utilizing the instrument to measure the impact of coursework that integrates content on cultural responsiveness and classroom management on teachers' efficacy beliefs. A mixed methods approach will be utilized as the researcher will combine information from statistical analyses with qualitative analysis of participants' reflective logs to form conclusions. The implications for teacher education and research will be discussed relative to both studies.

B-AWARE: Guidelines to Support the Self-Regulated Learning of College Students

YunJeong (Eunice) Chang, *Learning, Design, and Technology, University of Georgia*

A primary goal for post-secondary education is to cultivate independent, lifelong learners. Instructors often assume that college students, as adult learners, can manage their learning progress independently and effectively. Unfortunately, many college students lack the needed skills to succeed as independent learners, and many instructors are ill-equipped to accommodate their needs. To support both instructors' and students' needs, readiness, preferences, interests, and practices, effective learning environments can better differentiate instruction while equipping individual students with skills to better regulate their own learning. Existing presentation, much of which is based on self-regulated learning theory (SRLT), suggests a B-AWARE guideline for instructors to follow.

Concept Mapping: A Critical Thinking Technique

Charles M. Harris, *Department of Psychology, James Madison University*
Shenghua Zha, *Center for Instructional Technology, James Madison University*

A Solomon four-group design was used to assess the efficacy of concept mapping as a critical thinking technique for 320 students enrolled in four hybrid sections of an introductory psychology course. No significant differences were found for the covariates, gender and total, verbal, and math SAT scores. Critical thinking applied to selected complex concepts that are typically presented in the course comprised the dependent variable. The independent variable was variations on awareness of and the construction of concept maps while preparing for each of three unit tests. Students were required to use Cacao, a free online resource, to their concept maps. Concept maps are diagrams of relationships within and among complex concepts. It was hypothesized that graphically depicting the structure of complex concepts would facilitate accuracy in critical thinking during preparation for and performance on unit tests. Significant differences in subtest scores for specified complex concepts were found on unit tests one and two. On both tests, students who were required to construct concept maps performed significantly better than students who

did not construct concept maps. No differences in student performance were found on test three. Interpretation of the findings suggest that the construction of concepts maps facilitates critical thinking and performance on tests when the complexity of a concept consists of coherence and interaction within the concept as was the case on tests one and two. On test three, where no significant differences were found, the specified concept consisted of two elaborate serials. In summary, our findings suggest that students possess adequate academic skills for learning content in a serial format but require additional skills when coherence and interaction characterizes the content.

Designing a Support Structure for the Conversion of Classroom Lessons to Online Delivery

David D. Carbonara, *Duquesne University*

This proposal describes the support structure provided by instructional technology candidates in undergraduate, master's degree and doctoral degree programs for teachers integrating technology into their face to face and online classrooms. It will articulate the questions to ask before, during and after learning how to teach online.

Designing Intuitive Web Pages for e-Learning

Titilola Obilade, *Virginia Tech*

This research paper is about designing intuitive web pages for learning. It is still a work in progress. I have looked at the different frameworks for e-learning and they all possess a common thread; there is a desire on the part of the facilitator to reduce the separation between the instructor and the learners. However, the blending of facilitator and learners and learners with other learners depends on the personality type of learners. Further, I have looked at the various interfaces that are pertinent to e-learning: learner interface, user interface and instructional design interface. In designing web pages for learning, the designer must match the requirements of the learner to the user tasks (Dick, 1997, p.365, Mandel, 1997, p. 257). This research would be a quantitative study that would look at learners' use of different interfaces and they would rate their intuitiveness based on a Likert scale.

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Developing Teaching Proficiencies for New Instructors Through a Learning Community

Christopher Barb, Tracy Gilmore, Monena Hall, Tracy Hall, Neal Henshaw, Anne Lawrence, Carolyn Meier, Rebecca Miller, Lesley Moyo, Jennifer Munson, Andi Ogier, Sara Thum
University Libraries, Virginia Tech

Learning to teach can be achieved through formal teacher education programs, or through in-house training programs that are pedagogically designed to develop teaching proficiencies for subject and disciplinary experts. At Virginia Tech, a curriculum was developed for a cohort of new instruction librarians and staff from across several library departments to prepare them for teaching roles within the evolving library environment. The cohort's year-long experience was designed to immerse them in an instruction experience that involved practical experiences designed to create an understanding of theoretical foundations of teaching and learning, while also providing them the opportunity to develop a teacher identity that would help shape their techniques as an instruction librarian. A total of 10 librarians and staff participated as members of the cohort, with the guidance of three facilitators. This poster session outlines the rationale and goals of the program, as well as the various methods and resources employed to cultivate teaching proficiencies of the participants. The poster includes evaluative feedback from the participant, preliminary outcomes of the program, and recommendations.

DIALOGUES

Carolina M. Sosa, *Humanities and Social and Behavioral Sciences*
The State University of New York – Rockland Community College

DIALOGUES were founded and are coordinated by the author to foster and widen learning as well as to promote the academic and professional development of participants by extending dialogue beyond the classroom. Participants enter dialogue to pursue truth, thus making it open, friendly, not contentious, not argumentative, and not disputatious. They listen to understand one another's points and to better, whenever possible, weaknesses or flaws. Given the purpose and nature of *DIALOGUES*, the results that can be expected are closer proximity to truth, better understanding, consensus, or a 'to be continued.' *DIALOGUES* consist of the following areas: Philosophical, Pluralism and Diversity, Interdisciplinary, Black, Latino, and Ethnic, and Stephanie White. *DIALOGUES* have as their:

Vision - Expression and growth through inclusive dialogue in an environment of mutual respect

Mission - Commitment to excellence, knowledge and understanding, and pluralism and diversity for the common good

Philosophy - Unity of knowledge and practice

e-Surance: Ensuring Quality Dissertations in a Burgeoning Online Doctoral Program

Fred Milacci, Amanda Rockinson-Szapkiw, & Lucinda S. Spaulding
School of Education/Department of Graduate Education, Liberty University

With attrition rates over 50% nationally, assisting doctoral students to successfully navigate the dissertation process and produce a quality dissertation has always been challenging. This is compounded when students pursue their degree almost exclusively online. We provide an overview of the process developed for our Ed.D. program that not only services and mentors over 500 students in the dissertation phase, but strives to ensure that these students' dissertations are academically sound and methodologically correct. We describe the human and technological resources needed to provide oversight of this quality "e-surance" process.

**Effective Teaching Characteristics in Post-Secondary Introductory
Biology and Chemistry Courses**

Tobin Richardson, *Department of Natural Sciences, Indiana University Southeast*

The level of retention in any university course or program is inevitably influenced by teaching characteristics. Although retention in all areas of academia is imperative, this is especially the case within the "hard" sciences. Particularly introductory courses in biology and chemistry are characterized by exceptionally high rates of withdrawal or failure by the course end. Theories surrounding methods of effective teaching within these courses are both plentiful and relatively diverse. This topic has gained particular attention recently due to pressure from university funding sources to increase levels of persistence and success in their student population. Introductory courses within these subjects are especially important because they often play a major role in university general education, and are typically pre-requisites to those wishing to be accepted into professional and medical programs. Therefore, unlike advanced science curriculum, these courses may not always be taken primarily by choice, but rather due to the perceived necessity by a student in order to reach a specific objective. Many theories exist that explore factors important to promoting success within these classes, and a few themes relating to course pedagogy are consistently shown to impact classroom success. Factors such as creation of an exploratory environment, use of variety within the classroom, explicit and concrete instruction of core concepts, and absence of logistical issues that distract or hinder student learning all appear to be especially important to student achievement. Although ambiguity exists regarding how to effectively and practically incorporate these components by instructors, it is necessary for the educators involved within these classes to understand how their students may be affected by these characteristics.

**Employability Skills for Humanities and Social Sciences College Students
at United Arab Emirates University**

Mohamed Albaili, *College of Humanities and Social Sciences
United Arab Emirates University*

Preparing students for employment and job market is a major goal of the College of Humanities and Social Sciences at United Arab Emirates University. Educators and employers agree that the balance between broad knowledge and specific skills should be the focus of higher education. The purpose of this paper is to formulate a practical model of employability skills for Humanities and Social Sciences college students. The model is firmly based on existing research findings in employability and job market requirements.

The model consists of three components: skill category, defining skills, and learning outcomes. The skill category consists of six major employability skills: communication, numeracy, thinking, information management, interpersonal, and personal. Each category contains a number of defining skills that must be mastered and demonstrated by the graduates. Each category and its defining skills are associated with specific learning outcomes that define the levels of achievement required by the graduates.

The model can be used as a framework for working with students to develop their employability skills throughout their academic and practical preparation. The model can also be used to explain the conception of employability to students and their parents. It will be a useful tool for curriculum planners, instructors, careers advisors and any other practitioners involved in employability activities. It will also be used to develop a measurement tool for employability.

**Enhancing Affective Learning Outcomes Through the Use of
Objective Structured Clinical Examination (OSCE)**

Ravi Rathnam & Mary Anne Ramirez, *School of Health Sciences, Stratford University*

Healthcare providers' interpersonal and communication skills have a significant impact on patient care and consequently correlate with improved patient compliance and outcome. The pilot study was designed to assess the efficacy of using standardized patients with an objective structured clinical examination (OSCE) to that of using a traditional didactic lecture format. The study was primarily focused on the affective domain of learning outcomes. A pre-test using a simulated patient encounter was administered to all students entering their first clinical course. The students were randomized to one of the following two conditions: a) students assessed by using traditional learning standards and b) students assessed and debriefed using the OSCE with standardized patients. The patient encounter was videotaped, transcribed, and scored using a Likert-type five point scale questionnaire. The scoring was performed by the student, the standardized patient, and faculty. After the training, several sets of longitudinal assessments of the clinical encounter with the patient were collected and analyzed. In addition, focus groups were created among the students, standardized patients, and instructors to discuss the outcomes of the simulated patient encounters. Preliminary results show statistically and clinically significant improvement within the affective domain of learning in the students assessed and debriefed using the OSCE with standardized patients.

**Sages to the Side: A Learner-Centered Mindset at the Agriculture Education Training Research (AETR)
Institutions of Senegal**

Patrick Guilbaud, *USAID/ERA, Virginia Tech*
Ozzie Abaye, *CALS, Virginia Tech*

For this presentation, we report on a comprehensive teacher training and support approach being implemented in Senegal to achieve a learner-centered mindset at the country's agriculture education training research (AETR) institutions. The teacher training intervention, which involves a mix of: participatory analysis, preliminary skills development, local experimentation, advanced skills development, and sustained mentorship is part of the capacity

building program of the USAID/Education Research in Agriculture (USAID/ERA) project in the country. After a year-long comprehensive analysis of Institut Supérieur de Formation Agricole et Rurale (ISFAR), and other AETR partner institutions, USAID/ERA decided to pilot the teacher support intervention at ISFAR, which is the undergraduate agriculture unit of the University of Thiès. We outline, via the presentation, the preliminary results from the intervention and the steps we are taking with our partners to achieve the goal of greater focus on students learning and success in the program. We will also discuss the focus that we are placing on overcoming divides, barriers and challenges that could impede progress regarding the full implementation of the training and support program.

Evaluating and Demonstrating “Inquiry” as an Approach to Teaching General Education

Jasminka Ninkovic, *Division of Social Sciences, Oxford College of Emory University,*
Satu Riutta, *Institutional Research, Oxford College of Emory University*

When a college adopts a new pedagogy for general education classes in the freshman and sophomore year, what evidence can it collect to assess whether learning outcomes and experiences in the classroom really differ from the old approach? Are faculty selecting different goals, and are students learning different skills? This practice session explains how inquiry based learning operates as a campus-wide requirement; demonstrates one example of it; and shares student views and assessment data. A faculty member will engage the audience in an inquiry based assignment; an international student will explain his/her acculturation to a liberal learning environment that uses an inquiry based approach; and an institutional researcher shares course evaluation data demonstrating the strengths and weaknesses of an inquiry based approach.

Evaluating Learning Through Note-Taking and Hands-On Strategies

Sherese Mitchell, Teacher Education Department, Hostos Community College

Student engagement and achievement is difficult when learners are preoccupied and challenged with organizing academic content. Moreover, note-taking is prominent in many courses that college students encounter. This study compared the effects of instructional methods on the achievement and attitudes of 121 community-college students. In one group, guided notes were provided. In another, task-cards (hands-on) instruction was administered. The control received traditional lecture. All participants received a list of important concepts and treatments before each of the five 10-item assessments were administered. Upon conclusion of the tests, attitudinal and learning-style assessments were administered. This was to ensure reliability and validity of methods implemented. The same grouping was applied to the following semester with new groups of students. It was determined that notes and hands-on resources were more effective than traditional lecture. A statistically significant correlation was found between students' learning styles and the method of instruction presented. As students' actual preference increased so did their test performance and attitude. The mean scores of the control groups were lower than those in both treatment groups. This research corroborates the need for implementation of note taking strategies in higher education.

Evaluating the Effectiveness of Teaching Methods that Encourage Increased Student Engagement and Active Learning

Ryan Bezy, Dennis Dew, Ron Feldt, Alesia Hruska-Hageman, Jitka Stehnova, & Neil Bernstein
Mount Mercy University

Many recent studies have focused on the role of active versus passive teaching methods in higher education. Traditional lecture styles, where students receive information grounded in instructor taught classrooms is defined as passive learning here. Active learning, in contrast, requires students to more actively engage in course material through a wide range of critical thinking/application questions, group discussions, and small writing assignments. An introductory biology course was tracked over a two year period to determine the effects of passive versus active

learning on student performance and retention of information after changes in the instruction method to a more active learning environment. A one-way between-subjects Analysis of Covariance was carried out to examine the effect of instruction method on a 21-item biology test administered at the end of the semester, covarying out the effect of ACT scores. As predicted, ACT score was significantly related to test scores ($p < 0.001$). After controlling for ACT scores it was found that instruction method had a significant impact upon test scores ($p < 0.008$) with students taught primarily by passive learning scoring lower ($m = 14.16$, $sd = 3.57$) than the students in a curriculum with increased emphasis on active learning ($m = 15.45$, $sd = 3.07$). This study indicates that while passive learning still is an important mechanism for delivery of large amounts of information in higher education, exercises that increase student engagement and active learning may be beneficial to student performance.

Evaluation of Student Satisfaction with a Distance Learning Program

Melody Sharp, Susan Jones, Annette Strickland, & Stuart Tousman, *Jefferson College of Health Sciences*

The Institute of Medicine (IOM) *Future of Nursing report identified recommendations to address the predicted nursing shortage*. Specific actions include increasing the number of nurses with baccalaureate degrees from 50% to 80% by 2020 and encouraging nurses with associate degrees and diplomas to enter baccalaureate programs within five years of graduation (AACN, 2010, ¶ 4-5). This college's RN-BSN program transitioned from a traditional classroom setting to a distance learning format with a goal to increase baccalaureate educational options for nurses with associate degrees and diplomas. Assessment of students' satisfaction with distance learning is essential to assure the quality of the program and to determine if the program meets the needs of the students. Student knowledge and attitudes about technology are important factors to consider in the distance learning environment (Bequiri, Chase, & Bishka, 2010).

Purpose: To determine baseline data measuring the students' level of satisfaction with distance learning, and knowledge and attitudes related to technology.

Methodology: A web-based Distance Education Learning Environments Survey (DELES) with additional learning attitudes and web technology usage items was administered to a convenience sample of 75 Post-licensure BSN students. The valid and reliable DELES tool measures the six sub- scales: instructor support, student interaction and collaboration, personal relevance, authentic learning, active learning, and student autonomy (Sahin, 2007, Walker & Fraser, 2005). Data were entered into SPSS 20.0 and all relevant descriptive and inferential statistics were computed on the data set.

Results: Thirty two students completed the survey. Descriptive statistics indicated low use of web technology, but a positive attitude toward distance education. On the DELES tool, student interaction and collaboration was the lowest rated sub-scale. Correlational analysis indicated students who rated the program higher for instructor support, personal relevance and student autonomy had significantly higher positive attitudes about distance learning ($p < 0.05$).

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Faculty Experiences with Teaching Online and Face-to-Face Courses

Evelien Schilder, Zeynep Ondin, Michelle Ervine, Turki Alzahrani, & Congwu Tao
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Online courses have become a very popular way for students to take classes. It is the norm now for some higher education classes to be taught online. With most universities offering at least a few classes in an online environment, one must wonder what faculty experiences are teaching online classes and face-to-face classes. The purpose of this study is to investigate the experiences of five education faculty members with online and face-to-face instruction, using qualitative interviews. Five education faculty members are selected based on having at least two years of experience with both face-to-face and online instruction. After the interviews are recorded, each interview is transcribed by the interviewer. First, each transcript is coded by the interviewer. Subsequently, each transcript is reviewed by the other researchers. Since this study is currently still conducted, no results can be reported yet. The results of the study should be in by December 2012.

Faculty Taking Students Abroad: Who Are They?

Gina J. Mariano, *Troy University*

There has been an increase in the number of students who study abroad (Institute of International Education, 2008). As the world becomes more globally interconnected, there has been an increase in demand for students who are globally aware. The United States established a federal commission that set a goal of 1 million students studying abroad annually by 2016-2017 (Lincoln Commission, 2005). But, who will teach and travel with these students on their path towards global awareness? Instructors who have taken students abroad, instructors who will take students abroad in the future and instructors who have no plans to take students abroad will be surveyed. Sixty instructors on 6 campuses will be surveyed in order to help identify characteristics associated with instructors who teach study abroad courses. Identifying characteristics associated with instructors who teach study abroad courses can help universities identify need areas when developing study abroad courses, as well as help understand global awareness issues among instructors.

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From Learning-Centered Teaching to Significant Learning Experiences: Reflections on Fostering Lasting Learning

Sandra E. Gramling, Benjamin D. Lord, & Elizabeth Collison
Department of Psychology, Virginia Commonwealth University

Fink (2003) advanced an integrated approach to designing college courses to foster the creation of “significant learning experiences”. A decade later we have witnessed great strides in the advancement of active learning techniques in college class-rooms (e.g. Fallahi, & LaMonaca, 2009; Gramling, & Auerbach, 1998). However, the extent to which this increase in active learning actually enhances significant learning experiences has proved difficult to assess (e.g. Fallahi, 2008). The present proposal reviews the author’s shift from a traditional lecture based course to an active learning course and the roadblocks experienced in assessing “significant learning experiences.”

Revamping a large enrollment (n=200+) undergraduate stress management course from the traditional lecture format to an active learning format is reviewed schematically. The overall scheme presents 12 modules theoretically linked

into 4 units. Each module begins with the practice of a specific experiential exercise followed by peer to peer discussion (“pair and share”) and class discussion. Mini-“lecturettes” (20-30 min) are aimed at tying the stress management exercise to relevant literatures in stress physiology, specific learning and/or coping theory, and outcome literatures. Each week an Out-of-Class Assignment expands on the in-class practice and students provide written responses to integrative questions linking the exercise to key course concepts. Weekly open-book on-line quizzes/tests reinforce foundational knowledge. In-class use of student response system (“clickers”) and “2-minute papers” enhance active learning. One over-arching participation project spans each unit.

Student evaluations of the revamped course have been outstanding. Anecdotal, qualitative, and some quantitative evidence of student gains in each of Fink’s taxons (Foundational Knowledge, Application, Integration, Human Dimension, Caring, Learning How to Learn) are reviewed. The roadblocks encountered by the authors in trying to implement and evaluate an integrated course design along the lines of Fink’s taxonomy of significant learning experiences are presented along with various solution scenarios.

Funding and Supporting Faculty Online Course Development: VA Tech’s Model for Promoting High Quality Online Learning

Lujean Baab & Dawn Stoneking, *Institute for Distance and Distributed Learning, Virginia Tech*

Developing online courses takes time and focus that faculty are reluctant to commit when faced with this in addition to regular workload, research and publication requirements. To address this reluctance and to promote and ensure high quality online learning experiences, Virginia Tech established funds and processes to support the development of online learning. This presentation outlines the model used both for funding and the development process required under that funding. This process includes faculty preparation, project-based professional development throughout, a quality assurance peer review, and a Departmental review at completion. Participants will engage in guided discussion as they learn about this model and ways in which it can be implemented or adapted for implementation at their own institutions.

Group Work in Online Classes – What Works, What Doesn’t, and How Do We Know?

Jennifer Sliko

One concern with asynchronous online courses is maintaining professor and peer interactions throughout the course. Student/professor interactions are sustained through course announcements and targeted email correspondence. Student/student interactions, crucial for peer-led learning and building a sense of community in the class, are often limited to collaborative projects. Students in introductory geology courses participated in two different methods of collaborative work, and the success of the different methodologies were measured by student grades and feedback from course evaluations.

Early collaborative work required each group to create and submit a single document for assessment. Based on student comments, this format is not ideal, as students felt compelled work synchronously in an otherwise asynchronous course. Additionally, many students tried to meet “face-to-face” to complete the collaborative work, which compounded frustrations with this “online” format of group work. To address these concerns, the format was altered to an asynchronous group discussion on a discussion board. This method of group work still encourages student interactions through peer-led learning. However, as individual student posts are now assessed instead of a group report, students are more focused on the content of the group project rather than the distribution of work.

Despite a distinct change in tone of student comments, feedback from course evaluations show no difference in perceptions of students/student interactions between the early and recent versions of group work. Future work involves more detailed post-semester questions about student/student interactions and peer-led learning.

Growth and Renewal for Early Career Faculty

Maria Stallions, Leslie Murrill, & Lisa Earp, *Education Department, Roanoke College*

College and university faculty frequently encounter a unique set of challenges in the early years of their careers. These challenges can include embedding disciplinary expertise within instructional effectiveness, meeting the needs of diverse students, implementing new technologies and complying with institutional and external professional demands. This poster presentation suggests the Reflective Practitioner Phases (RPP) model, originally designed for new K-12 classroom teachers, as a mechanism for higher education faculty to utilize as they negotiate these early career hurdles. The RPP Model is a complex and developmental process that requires self-awareness and active engagement. Building on the Gibbs Reflective Cycle Model and Schon's principles of reflection, the RPP is an experience-driven model with six distinct phases. The Model prescribes a continuous reflective cycle through which developing professionals - in this case, early career faculty - critically examine their thoughts, actions and reactions as a framework within which to gain greater understanding of professional situations and develop strategies to effectively resolve future events. Application of the RPP Model to higher education settings offers promising opportunities for future research in the field of new faculty professional development.

Higher Education of Future Environmentalists in the Field of Environmental Management in Ukraine: Integrated Modeling Approach

Denys Shofolov, *Ecology and Sustainable Development,
National University of Life and Environmental Sciences of Ukraine*

This study was aimed to develop a structural-functional model on organizing education of future environmentalists in Ukraine. The model is a schematic representation of main structural and functional components, principles and types of organizing higher education.

How to Teach Online: One Course Design with Three Delivery Options

Michael Orey

We have completed the design of the course, How to Teach Online, with the intent of being able to deliver the course in three different ways. We are designing it as a graduate course. As such, this would be an instructor led course. However, we also have designed each week so that it can be delivered asynchronously or synchronously. Because of this flexibility, the course can be delivered online completely asynchronously, completely synchronously, and some combination of the two. We have also set this course up for continuing education credit at a greatly reduced rate, but still instructor led. This option would still allow for either synchronous or asynchronous delivery. By offering it for CEU credit, a much wider audience would be able to take the class. Finally, each week's topic will include an interactive, self-instructional module (most are tutorials, but there are a couple of closed-ended webquests, and a branching simulation). Each of these modules can be delivered as a self contained 1-hour of seat time module or can be combined for up to 11 hours of self-instructional content. This latter option will be sold worldwide, but will also be used internally to our university for faculty who just want to learn more about how to use discussion forums or how to use synchronous classrooms or learn about online pedagogy or any of the 11 topics in the course. The course will be demonstrated and each of these options will be explored in the session.

**Immersive, Authentic Learning Contexts: Student Reflections
on Personal and Professional Growth**

Rebecca K. Splan & Shea Porr, *Department of Animal and Poultry Sciences, Virginia Tech*

Higher education plays a key role in the creation of a competent and adaptable workforce. Colleges and universities must not only enhance content knowledge and technical skills in students, but also develop transferable skills in collaboration, communication, self-direction, creativity, critical thinking, and problem solving. Despite institutional efforts to integrate such skills into curricula, surveys reveal employers are disappointed with the development of these competencies in today's undergraduates. In 2006, a new learning context was created in equine science at Virginia Tech. Students participate in a semester-long, immersive, cohort-based experiential learning program designed to prepare them for careers in the biological or health sciences, and in the equine industry. Grounded in constructivism and set against the backdrop of an off-campus equine research and outreach center, the program allows faculty to design and utilize authentic situations that facilitate knowledge creation and advance equine-related skillsets, higher order thinking, and social negotiation competency. To date, over 60 students have completed the program and have spent at least 6 mo in employment or professional school. In this study, these students provided reflective feedback via Likert Scale (4=very much; 3=somewhat; 2=slightly; 1=not at all) and open-ended queries to determine perceived program impact. Students (n=43) indicated the program played a key role in preparing them for their chosen career (3.82±0.09), improved equine-related knowledge and hands-on skills (3.77±0.08 and 3.74±0.09, respectively), enhanced understanding of research (3.56±0.12), and improved transferable skills (3.48±0.11). Ninety-six percent of respondents identified improvements in communication and ability to work with and value others unlike themselves as the most useful outcomes related to transferable skills. Overall, results indicate that faculty-facilitated learning in an immersive, authentic context can improve content knowledge, technical competency and transferable skills in undergraduates. Future work will compare responses of program participants with cohorts on campus enrolled in equine-related classes.

Improving Student Learning Outcomes Through Course-Based Service Learning

Caroline M. Brackette, *Counseling and Human Sciences, Mercer University-Atlanta*

There has been an increased emphasis on the need for higher education institutions to create more democratic, participatory, and reciprocal partnerships with community organizations within their service learning initiatives (The National Task Force on Civic Learning and Democratic Engagement, 2012). The Task Force calls for faculty, students, and community stakeholders to engage in intergroup and deliberate dialogue about curriculum and pedagogy, service learning partnerships, and collective civic problem solving. In order to address the call to action, a course-based service learning component was implemented into two courses in order to maximize student learning outcomes and encourage civic responsibility. Each course required students to secure volunteer experience at a community organization or K-12 school system. Each was required to provide proof of supervision and engage in a service experience in an area related to course content and to demonstrate achievement of student outcome objectives. Student course evaluations, journal reflections, and service experience presentations suggest the service learning component made a positive impact on learning outcomes and the overall course experience.

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Incorporating Wellness into the First-Year Experience

Mike Krackow, Holly Richardson, Jack Johnson, Chad Joyce, Shannon Dryden, & Jimmy Coale
Physical Education, Virginia Military Institute

Recognizing the need for knowledge concerning the ways health behaviors can affect quality of life, the Virginia Military Institute (VMI) incorporated a Wellness Concepts course as part of its new Core Curriculum for all of its first-year cadets. As part of the Quality Enhancement Plan (QEP) for its fulfillment of the reaffirmation of accreditation for the Southern Association of Colleges and Schools (SACS), the Institute developed a Core Curriculum that will graduate students who possess “*a lifetime commitment to physical fitness and wellness*” as one of its attributes. Specific learning outcomes through the Health and Wellness domain included: (1) Applying a working knowledge of wellness-related behaviors to achieve and maintain a healthy lifestyle, and (2) recognizing the impact of physical inactivity on health and wellness in a societal context. As the new Core Curriculum was implemented, the Ad Hoc Fitness Task Force recommended the development of a Wellness course for all first-year cadets. In fall 2012, PE 105: Wellness Concepts was initiated with the purpose of improving the overall health and physical fitness, specifically for the first year Cadets in the Corps. As part of the implementation, an evaluation was conducted to determine the effectiveness and value of the Wellness Concepts course. The evaluation surveyed the cadets using a 5-point Likert-like scale where 5 was high and 1 was low, or no contribution. Surveys were given in a Pre-Post format. Results from the surveys will help determine if any changes or revisions need to be made to the course so that it can enhance the first-year experience, and improve health behaviors of the cadets, while achieving the learning outcomes in the Core Curriculum set forth by the QEP.

Is Plagiarism in the Eye of the Beholder?

Susan R. Van Patten, *Faculty Development, Radford University*
Candice Benjes-Small, *McConnell Library, Radford University*

Given a sample paper rife with plagiarism and patchwriting, can students and faculty members accurately identify and correct these errors? Participants in this interactive session will discuss effective ways to train students to avoid plagiarism and learn about inconsistencies among faculty when it comes to plagiarism issues.

Knowledge Construction in a Java Programming Online Help Community: An Examination of Social and Argumentative Dynamics

Hon Jie Teo, *Department of Engineering Education, Virginia Tech*

The significance of learning that occurs outside formal classroom environments – informal learning – is gaining increasing prominence within practice and research on science education but has received little attention so far from engineering educators. Informal learning environments are abundant for engineering learning to occur, ranging from the engineering workplace to do-it-yourself activities that occur in homes and in this study, we cast our attention on online communities. These text-based collaborative learning environments provide a platform for learners to make connections with helpers of various levels of expertise, and engage in discourse to address the tasks at hand. While most researchers have focused on online discussion tied to formal education settings, there is limited research on online help forums, particularly on how social dynamics and discourse amongst learners and helpers support knowledge construction. In this study, we leverage data mining techniques to collect archival data from a Java programming online help community and organized the data into manageable categories. Two approaches were adopted for the analysis and characterization of the learning activities that occur as members and helpers engage in discourse on these forums: social network analysis and content analysis. We explored the social structure of the help forums through social network analysis and then used sub-graphs to characterize interaction patterns in the help forums. Our findings indicate that the most frequently occurring patterns of interactions are reciprocal but not completely connected. To examine knowledge construction through argumentation, we adapted an analytic framework for argumentative knowledge construction to examine how learners and helpers engage each other in

these communities and how argumentations shape the learning process. We present findings that indicate that social dynamics between helpers and tendencies of learners to stay on task have an impact on the knowledge construction process. In sum, the findings from the study show that the online help forum provide an extremely conducive environment for participants to engage with helpers in a hierarchy based on expertise rather than tenure and through productive discourse they build knowledge and construct new ideas about the task at hand. We argue that engagement with online help forums can complement formal education and through a discussion of the online community also sheds light on how this environment and infrastructure can be designed and implemented.

**Linking Principles of Psychology to Higher Education Pedagogy:
Using Social Stories to Get Inside the Minds of Students**

Jillian Flood, *Psychology, Iona College*
Dorothy Leone, *Speech Communication Studies, Iona College*

Recognizing that students are more than floating brains in a classroom is the first step to teaching skills that transcend beyond specific course objectives. To that end, research on the characteristics of effective teachers includes mastery of subject matter followed by concern for students as the top two domains assessed (Miller, 1988). Participants in this session will operationally define “learning,” consider some of the variables that prevent students from being available to learn new information, and brainstorm ways to prevent student disengagement. By the conclusion of the session, participants will be able to describe a number of ways higher education pedagogy can identify and respond to the thoughts that are distracting students from being fully present in the learning experience. By getting inside the minds of students, we offer students an opportunity to express the issues that are preventing authentic learning, provide insight into the ways teaching strategies are or are not meeting their needs, and raise awareness of their nonverbal communication.

Lowering Development Barriers in Educational Game Design

Austin Cory Bart, *Computer Science, Virginia Tech*
Robert Deaton, Eric McGinnis, *Computer Science, University of Delaware*

Today, video games are a ubiquitous part of society, enjoyed by demographics ranging from young children to senior citizens. Because children are often particularly fond of video games, they stand to benefit significantly from learning experiences as fun activities in content areas like mathematics, science, social studies, and language arts[1]. The process of creating an educational video game in itself provides a unique opportunity in teaching and learning at the college level, as tools and techniques from software engineering, computer science, and learning theory are combined into one discipline[2]. With limited time to cover all of these topics in a single semester, there is a growing interest in lowering the barrier to entry for a course in educational game development[3]. We provide a series of software tools which both together and individually facilitate the development of basic educational games. We then discuss the integration of these tools into an educational game development course which produces games for middle school students and provide several qualitative measures of the differences between the pre-existing tools and the ones we provide. We compare the games developed to those of previous semesters in a variety of areas including quality, entertainment value, and educational content and discuss how these tools can continue to be improved and further integrated into the classroom.

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Mobile Information Literacy: Using Tablets to Promote Inquiry Skills Students Need to Succeed

Rebecca K. Miller, Heather Moorefield-Lang, & Carolyn Meier, *University Libraries, Virginia Tech*

The proliferation of devices such as tablets and smartphones has created a new information landscape that demands critical information skills that may not be addressed by traditional models of information literacy and inquiry. This session explores the idea of mobile information literacy by highlighting the ways that mobile devices have dramatically changed the way people seek, access, evaluate, and use information. Session facilitators will underscore the information skills that educators may particularly want to address in the classroom and other learning environments and will offer strategies for integrating these new information skills into different disciplines and contexts. These strategies will include the use of tablet computers in the classroom, and how educators can leverage tablet computers, apps, and other resources in order to increase engagement and help students gain the information skills that they need to be successful in a mobile, connected world.

More than Just the Words: Academic Success for English Learners Through Problem Posing

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American universities are becoming increasingly diverse, with increasing numbers of English Language Learners (ELLs) being among the groups adding to this phenomenon (Institute of International Education, 2011). In an effort to improve the English language proficiency of incoming students, many universities have created or partnered with Intensive English programs to bridge the gap for students who need to improve their language skills in order to meet all university requirements for enrollment (DeAngelis, 2011). The vast majority of these programs place heavy emphasis on linguistic competence and focus on the four domains of listening, speaking, reading, and writing while often ignoring higher order thinking skills that are necessary for university success (Lau, 2010). ELLs need to practice the higher order cognitive skills *along* with the language needed to actively participate in advanced classes and general campus life, and as such, I assert that the development of critical thinking skills during intensive English programs is essential to the success of program and university graduates. Toward avoiding the traps of bestowing knowledge through banking education (Freire 2011/1997), I advocate the use of problem posing as a classroom tool and pedagogical practice in the university preparation of ELLs. In this model, questioning is central within the curriculum and encourages students to critically analyze the world around them toward social change. As U.S. university graduates will span the globe as inventors, innovators, and leaders of business, economic, and political interests, memorizing words and expressions alone are not enough to foster local and global social change.

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Multicultural Design Projects Enhance Students' Professional Preparation

Kathleen Parrott, *Apparel, Housing and Resource Management, Virginia Tech*

Today, the professional designer works in an environment where clients, colleagues, and projects are increasingly international and multiculturally diverse (Kim, n.d.). Housing design faculty in the Apparel, Housing and Resource Management Department at Virginia Tech were challenged to “build capacity among students to work

professionally with a wide range of people” through *Diversity among Consumers: A Year of Study* (Beamish, Kincade & Anong, p. 138). To address this challenge, and better prepare designers for their future profession, multiculturally oriented projects were added to studio design classes. Two projects are highlighted in this abstract.

- The first project was a large family kitchen designed for a cultural group within the United States, defined by factors such as lifestyle, religion, ethnicity, race, rituals, or recent immigration. Pre-design research and programming focused on food, cooking and eating patterns; how food fit into celebrations and lifestyle; and where and how they ate. Many students chose cultural groups connected to family, friends, or a country they wished to visit (Clemons, 2005). Student outcomes included increased research skills, greater knowledge of a cultural group, and more experience in visual presentation of a culture (color, pattern, and motif). A juried gallery exhibit of student projects enhanced selected students’ portfolios and resumés.
- The second project was a family kitchen, teaching kitchen, and dining area in an Asian-American household. This client was chosen for unique, non-European food choices (Drab, 2008) and diversity within the family. Students were challenged with new design parameters with opportunities for portfolio quality work that demonstrated multicultural design experience.
- The two projects built capacity for the Virginia Tech housing design students to become “professionals in a diverse global environment” (Beamish et al., p. 138). In addition, the quality and creativity of their designs was sparked by the diversity of the projects themselves.

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New Teaching Approaches to Assist Graduate and Doctoral Students with Learning the Academic Publishing and Career Development Process in Business, Public Administration, and Public Health

Darrell Norman Burrell, Michelle Quinteros de Czifra, Aikyna Finch, & William Quisenberry

There is a significant need for graduate and doctoral students to establish their knowledge and expertise outlined of course grades and transcripts. Publishing academic work will make a difference when applying for an academic job in a research-oriented position. Likewise, a great number of teaching oriented universities are requiring publications for their scholars in order to offer them a position. Publishing, especially in peer-reviewed journals outlines a level of respect, legitimacy, and acceptance from other scholars in the field. The challenge is that it is impossible for students to engage in the publishing process if they are never mentored or taught by faculty. The goal of teaching on the graduate and doctoral level should not just be to teach subjects and help students graduate, it should also be to give students the tools that will make them competitive after graduation for jobs and career opportunities. The job of this career preparation should not be pushed into the hands of university career services offices that really are not the most knowledgeable the tools required for a successful academic career. This process also needs to start before the student graduates from their degree program.

We put forward the idea of new teaching and learning approaches on the part of faculty that encourage, nurture, and teach graduate and doctoral students about the nuances of publishing and building an academic resume. Few students, even those registered in doctoral programs, engage in formal academic writing at a level sufficient enough to get accepted in quality peer-reviewed journals (Gray & Drew, 2008). They are often not mentored by faculty or taught in academic classes about the academic publishing process. We describe considerations, paths, and reasons that graduate and doctoral students might consider in order to improve their pursuits of publishing academic articles.

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Phase III: Students' and Faculty Members' Self Perception of the Effects of an Interprofessional Simulation Activity on Interprofessional Skills

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Professional identity often isolates students and faculty in their specific discipline. The Institute of Medicine (IOM) in the Quality of Health Care in America Report emphasized the need of the healthcare professionals to work in interprofessional (IP) teams to improve the quality and safety of patient care. Simulation activities serve as a safe environment for the students to learn and develop competencies for the delivery of quality patient care. **Purpose:** To evaluate the students' and faculty members' self-perception of the effects of an interprofessional simulation activity on interprofessional skills. **Method:** This mixed method study builds upon a four-phase simulation model. Phase-3 evolved from 3 to 10 disciplines with 190 participants. Descriptive statistic was used. Content analysis organized the qualitative data **Results:** The highest difference in the means of the confidence level of the Interprofessional Practice Competencies from pre-to-post activity was noted for Physician Assistant (PA) students and Respiratory Therapy students. The lowest difference in the means was noted for Physical Therapy Assistants. The highest difference in the means for faculty from pre-to-post activity was noted for Public Health and Medical Laboratory Science faculty.

Preparing Teachers for 21st Century Classrooms: Addressing the Needs of English Language Learners

Gresilda Tilley-Lubbs & Bettibel Kreye, *Virginia Tech*

This presentation will focus on collaborations between faculty and students in Mathematics Education and English as a Second Language (ESL) Education programs. Through this collaborative effort, preservice teachers from both programs engaged in opportunities to work together to address curricular and linguistic gaps that occur for English language learners (ELL) in mathematics classrooms. By modeling collaboration, facilitating group interactions, and creating authentic field experiences, two faculty members created a space for their preservice teachers to practice collaboration and to develop the necessary knowledge, skills, and dispositions to address the educational needs of linguistically and culturally diverse students. In this session, the presenters will guide participants through activities designed to help them develop: 1) an understanding of their own perspectives and those of the students they teach in relation to the students in K-12 schools; 2) the tools to compare standards for both programs; 3) ways to identify gaps in content standards and World-Class Instructional Design and Assessment (WIDA) Can-Do Descriptors (the language ELL are able to understand and produce in the classroom); and 5) strategies to plan instruction that will help their preservice teachers design lessons that support ELL.

Psychological Issues in Interdisciplinary Research and Education

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Research and education in interdisciplinary fields are of the great importance in contemporary pedagogy practice. As working in interdisciplinary fields requires new strategies for learning, teaching and team-work, there are several psychological issues which can affect the practice of interdisciplinary research and education. Learning new methodologies from other fields can bring difficulties for students and researches. Communication skills in interdisciplinary research are very critical and lack of proper understanding on communication skills can decrease the motivations of interdisciplinary researchers and students. In this work, we have discussed the possible

psychological issues in interdisciplinary pedagogy practice and we have recommended some approaches to deal with them.

Pyramid to Success Study Game: Helping Graduate Learners Achieve Excellence

Nicole Mauzard, *Northern Caribbean University*
College of Education & Leadership
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The Pyramid to Success Game is designed to create a positive environment in which players encode, rehearse, and transfer factual information gleaned from learning experiences they have had in and out of classes. For a few hours the players are immersed in an intense educational/learning experience. It is intended that each player will interact fully with the other players throughout their stay with the game. Two to six persons who have not yet completed their dissertations, theses, comprehensive examinations and or oral defenses in a graduate programme may play this game. The Pyramid to Success Game was conceived out of a felt need to provide some type of synchronized study method that would eliminate as much as possible studying in isolation, and the fear of taking oral or written examinations, its aim is also to alleviate some critical logistical issues that experience with participants who need to internalize the routine processes associated with their progress through their programme. While playing this game participants review academic concepts through which they may practice and demonstrate their values, morality, and articulate their worldviews. This integrated approach to learning gives the participants a chance to deepen their understanding of the college's administration's desire for the learners that is, become servant leaders who stand on a Christian worldview while practicing sound, research based approaches to leadership whether at home at work or at play. The game is based on three contemporary theories which have influence teaching and learning namely Brain Based Research (Caine and Caine, 1991); learning by doing proposed by John Dewey (1910), and Cooperative Learning (Slavin, 2002; Johnson & Johnson 1999; Johnson, Johnson & Holubeck 1993; Johnson, Johnson & Stanne 2000; Kagan, 2009; Green & Henriquez-Green, 2008)

Qualities of Exemplary Practice-Oriented STEM Publications

R. Brock Mutcheson, *Educational Research and Evaluation, Virginia Tech*
Michelle Sutherland, *Political Science, Virginia Tech*
Elizabeth Creamer, *Educational Research and Evaluation, Virginia Tech*

Practice-oriented publications have long been a mainstay of the literature produced by scholars interested in promoting the retention and recruitment of women in science, engineering, and technology (STEM). Any claims about the transferability of the activities or programs depend to some extent on documentation provided in the publication about its grounding in evidence during the planning stages, as well as on the quality of the evidence it produces to document the outcomes of the initiative. This presentation summarizes the results of a content analysis of practice-oriented publications in the field of gender and science, engineering, and technology (SET) appearing in four sources often accessed by engineering educators. Practice oriented publications are defined as gender and SET related publications with the name of a program, course, or activity in the title or abstract or with one of the purposes of the publication stated as being to describe a program, course, or activity. The mixed methods content analysis was conducted in two phases. Practice oriented publications (n=161) were identified from a large database (N=671) that already had been coded for nine variables. In the first phase of analysis, reviewers used a deductive rubric to evaluate each article on a 6-point scale to determine the extent to which the documentation provided reflected grounding in the literature and empirical evidence. Reviewers scored articles and confirmed inter-rater reliability achieved at least 90% on a weekly basis. Inter-rater reliability tests were followed by substantive discussion emphasizing characteristics of exemplary articles. The most highly rated practice-oriented publications not only scored at the top of the evidence-based scale, but also were exemplary in being explicit in detailing far ranging implications for practice. The presenters will provide examples from publications that reflect different ways of describing the implications for practice, including those that are narrowly and broadly defined.

Reducing Multicultural Intelligibility in the College Classroom

Osayimwense Osa

Arguably, “the culture of teacher education is local and therefore has advanced policies that serve the neighborhood schools but not the needs of future citizens of today’s globalized world.” (Kissock, 2007). This is why most teachers begin their careers with little more than superficial knowledge of the world. (Devlin-Foltz & McIlvaine, 2008).

For effective instruction and learning in the 21st century college classroom, which is fast becoming multicultural, faculty cannot afford to ignore the different backgrounds and interests of the students. Mutual respect must exist between the faculty and the student, and effective classroom management is mandatory. Multiculturalism is a reality and it is quite visible in today’s college classroom. Mere rhetoric cannot do full justice to multiculturalism. While it could sometimes be a broad subject to deal with, it is quite possible to address it productively in concrete terms in college classroom teaching.

Primarily to reduce pang of multicultural intelligibility for better understanding and effective teaching, this session uses foods and selected multicultural works to teach “bridges of understanding” and to discuss impediments to effective learning and teaching, and true understanding and appreciation of literary works or other works produced outside of one’s culture.

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Seeing the Connections: Zooming into Learning with Prezi

Jennifer Resor Whicker, *McConnell Library, Radford University*

Free yourself and your students from the drudgery of a slide-by-slide world and enter the infinite canvas of Prezi. Prezi is an exciting presentation tool that can be utilized in the classroom and in the online classroom environment. Apart from being used in person, prezis can be embedded in wikis or classroom management systems. Links to the presentations can also be easily sent out via email. The addition of audio to a prezi makes it just as effective online as it is in the classroom. Prezi offers a free account and, since it is an online, flash based tool, there is no software to download or compatibility issues to worry about, making it very accessible for students and teachers alike. Presentations are created on an infinite canvas instead of restrictive slides. It engages students with its visual aspects (using its panning and zooming elements to convey its message), while allowing them to make connections between the ideas on the canvas. By using varying sizes and positions of images and text, the relationships between information can be visually illustrated, allowing students to look at the information presented in new ways. This can help students put ideas into context and establish visual relationships. The literature shows that students retain more information and are more interested in presentations that are image rich. The fact that Prezi presentations can use images, text, video and audio and can be linear or non-linear, relates to many different learning styles. It is a great collaboration tool for group projects (allowing up to ten people to work in the same prezi at once), or allows students to take part in their instructor’s presentation, making them feel more connected to their own learning. Prezi is a dynamic way to present that can be adapted for many different learning styles.

Sense of Place in the Studio Environment

Shabnam Kavousi & Patrick Miller

Landscape Architecture, School of Design and Architecture, Virginia Technology

Sense of place is an important concept that is extensively discussed in the design and planning professions, particularly regarding the places people live and how they make them their own – place making. However, little attention has been given to educational settings and the role place making plays in learning. The sense of belonging to a community can be enhanced when students occupy and live in a place. This is very important when students leave home to attend university and are achieving their independence. In this sense, the universities play a vital role as an alternative community in developing students' character and personality. This is particularly true in design programs where students spend up to 90 percent of their time and energy in the design studio. Therefore, this study examines sense of place in the studio environment as an important part of architecture students' life. The design studio plays an important role in preparing students with fundamental skills and knowledge for later professional practice. This study explores the linkages between studio environment as an important part of **architecture** students' life, their sense of place and their learning process. The study consists of two parts, student interviews and studio observations. This is augmented by photographs that show how students individualize their space in the design studio, thus creating a sense of place. Analysis of the data collected on the physical appearance and on social interactions resulted in the identification of items effective in creating and augmenting the students' sense of attachment to the educational environment. The social relationships that come from a shared sense of place play an important role in the learning process. The importance of sense of place and the resulting collaborative environment that help shape the unique pedagogy of learning in the architecture program at Virginia Tech is evidenced by their high national rankings.

Skill Shortages in the Labor Market: A Question of Occupational Silos?

Joseph Mukuni, *Career and Technical Education, Virginia Tech*

A common topic of discussion among employers and workforce developers is the mismatch between supply and demand for skill in the labor market. In the literature, several solutions to the problem of skill shortages have been discussed. It has been suggested, for example, that workforce development programs should be broadened to accommodate curricula for all the occupations needed in the labor market. This solution is not, however, viable for education and training systems in developing economies because of paucity of resources. For such economies, there is need to search for more affordable solutions. This study investigated the possibility of promoting the concept of skill portability by determining the extent to which skills in one occupational area are transferable to a different occupational area. Awareness of the existence and nature of such skills could help mitigate the impact of manpower shortages. An analysis of a sample of competency lists from different trades was conducted to determine the existence of skills that different trades had in common. The analysis revealed that there were many skills that different trades had in common. Faced with this revelation, a focus group of trade teachers confessed that as a result of not being aware of the existence of portable technical skills, teachers missed the opportunity for cross disciplinary collaboration which could be a great cost saving measure. A major pedagogical implication of the findings of this study is that teachers in different trade areas should consider collaborating in the planning and execution of their lessons as a way of enhancing efficiency in skills development. Admittedly, this recommendation would pose a challenge because solitude is a major characteristic of the teaching profession.

Student Characteristics Impacting the Four Theoretical Sources of Self-Efficacy

Tonja M. Locklear, *Department of Mathematics, Averett University*

This study investigated the impact that gender, race, sexual orientation, hometown location (rural, suburban, or urban), high school GPA, college GPA and letter grade of a mathematics course in the previous semester had on the four sources of mathematical self-efficacy of 102 college freshmen attending three small, private, liberal arts institutions. Even though this study found no interaction effects between the student characteristics and the four sources of mathematical self-efficacy, this study did find statistically significant results for hometown environment and the letter grade received in the mathematics course the preceding semester at the Bonferroni correction rate of .025.

Student Interpretations of Historic Costume Influences in Contemporary Dress and Design

LuAnn Gaskill, *Department of Apparel, Housing, and Resource Management, Virginia Tech*

Since the beginning of human civilization, people from every country and culture all over the world have engaged in dress and adornment for protection, modesty, status, and/or decoration and self expression. The choices we make in the use of clothing, textiles, and dress is part of that human experience and reflected through themes in social life and class structure; social roles and changing patterns in social behavior; trade and commerce; industrial and technological advances; etc. To fully study and document the human experience also requires the study and documentation of how we dress and adorn our bodies. It is the study of historic costume. History of Costume (AHRM 4034) is taught annually at VT in the apparel program and is a course open to the university community. Throughout the semester, students study the history of western dress from the ancient world through contemporary dress of the twenty-first century using a wide variety of teaching methods especially focused on visual learning techniques, stimuli, and images of historic costume (films, PowerPoint presentations, historical clothing artifacts and museum pieces, fashion plates and pictures, etc.) Through a recent course project, students were able to relate contemporary design to historic design elements through the creation of a portfolio that incorporated design silhouettes and elements found in modern day dress that reflected an historic perspective. Completing this project required a review of historic costume as well as research involving a review of current fashion trends and contemporary design elements. This project increased student learning opportunities through research, design interpretation, and visual learning teaching methods.

Talk Amongst Yourselves: Using the Practice of Backchanneling to Increase Student Engagement, Build Community, and Inform Instruction

Laura Kassner, *Community College Workforce Alliance, Virginia Community College System*

Students' desire for continuous connectivity to their personal digital devices may distract from engaging in the classroom environment, to the frustration of instructors. This presentation introduces the concept of a backchannel as a means of harnessing the ubiquity of mobile digital devices for good: building community, informing instruction, and increasing student engagement. The presenter will model backchanneling in the session while providing strategies and resources to implement it as a means of structuring content-focused conversations, a forum for peer-to-peer assistance, and a platform for note taking and the answering of questions.

Teachers of Young Children as Teachers of Young Adults

Dawn Knight, *Teaching and Learning, Virginia Tech*

Service-learning provides an opportunity for college students to get *true* experience in education if the classroom teachers accept the role *college-student teacher* as another aspect of their jobs as childhood educators. Professionals and faculty often assign service learning components, assuming that immersion into the activity will lead to the acquisition of knowledge. Typically, service-learners are in the classroom to gather *explicit* information for their own studies. While there, they also pick up on what might seem like insignificant details as classroom teachers provide considerable amounts of *implicit* information, as well. Each of my students visited his/her site twice per week and recorded observations based on several domains of child development and related what they experienced to relevant readings from their coursework. Students wrote a site description and final synthesis paper that integrated information from class readings and experiences in the early childhood setting. Service-Learners frequently used their observations during fervent in-class discussions of topics such as discipline, competition, praise, and bullying in the early childhood setting. What I noticed about the journal entries and class discussions was that students were focusing more on the things they implied from interactions than the actual information provided them by their mentoring teachers. I also realized a common thread of misconceptions resulting from a lack of specific and intentional communication. Overall, the results suggest that classroom teachers may take for granted the amount of knowledge they possess, assuming that exists without being learned. Future implications involve a more intentional and reciprocal method of communication between the college classroom and the early childhood classroom. As service-learners observe and interact with children in the early childhood classroom, it is extremely important that the mentoring teachers are able to make explicit, the things that they do automatically.

Teaching Cultural Awareness and Acceptance Through Immersion Experiences

Caroline M. Brackette, *Counseling and Human Sciences, Mercer University-Atlanta*

Immersion activities provide unique opportunities for individuals to experience different cultures, perspectives, and environments. When such activities are incorporated as a supplement to class lectures, discussions, videos, and case studies; students engage in a more well-rounded learning experience which leads to a more holistic understanding and appreciation for others. Students have an opportunity to experience another culture beyond the readings and discussions from a classroom's etic perspective. While the basic knowledge from a didactic approach can be beneficial for informing students of another's worldview, the actual opportunity to immerse oneself into the world of another provides a learning experience from the insider's perspective that is invaluable. A social, or ecological, pedagogy was integrated into a cultural perspectives course to supplement the student learning experience. Students also learned about different cultures through didactic instruction, discussion, and case studies. In addition to exams and written papers, they were also required to engage in a series of various immersion activities with an ethnically different culture and write a reflection paper on the experience. End of the semester oral presentations and course evaluations suggest positive learning outcomes and increased knowledge, appreciation, and interest in culture by students enrolled in the course.

Teaching Models of Narrative Analysis

Anat Keinan, *Kaye College of Teacher Education, Beer Sheva, Israel*

Throughout the wealth of narrative studies, questions regarding analysis constantly recur. Narrative researchers from various domains have attempted to find methods of coping with the extensive data bank encountered by the researcher. For students it is much more difficult to analyze narratives collected for their research. Problems usually arise when dealing with a group of texts, but also with one or two isolated narratives. This practice session is aimed to provide Higher Education teachers and students with models for analyzing narratives and life stories.

Teaching Science in Large Lecture Classes Compared to a SCALE-UP Class Environment

John A. Chermak, *Department of Geosciences, Virginia Tech*

In the Curriculum for Liberal Education at Virginia Tech, students are required to take two courses to fulfill their scientific reasoning and discovery requirement (Area 4) and at least one course to help them understand critical issues in a global context (Area 7). "Resources and the Environment" fulfills both of these requirements. Traditionally, this course has been taught in a lecture format using iClickers with class sizes ranging from 25 students to more than 300. Recently this course was taught to 35 students in a SCALE-UP classroom (Beichner R.J., *The SCALE-UP Project*, 2008) using active learning pedagogies. Select learning goals for the course include content related to the subject, enhancement of the student's critical thinking skills, helping students understand the role of science in society, and encouraging life-long learning. Additional SCALE-UP classroom goals include engagement in class projects and discussion of content information that shifts students from passive didactic learning to more actively engaged learning.

Data analysis shows classroom averages on the multiple choice, true/false exam's to be approximately equal and pre/post testing increases using 15 questions showed equivalent gains in content information (pre-test mean = 48%, post-test mean for 3 exams, ranged between 85 and 90%). SPOT score class averages on a scale from 1-Strongly disagree to 6-Strongly agree show higher averages by more than 0.25 for the SCALE-UP (35 students, 66% reply rate) compared to the large lecture (260 students, 65% reply rate) for interest in the subject matter was stimulated, instructor fostered an atmosphere of mutual respect, and instructor seemed concerned about whether the students learned the material. One of the biggest challenges observed in teaching the course in the SCALE-UP classroom lay in shifting student attitudes and expectations from passive learning in a traditional large lecture-based course to active learning in the discussion-based SCALE-UP classroom.

Teamwork in the Humanities Classroom

Michael J. Alexander, *History, Virginia Tech*

In a classroom with upwards of 40 students, discussions are often dominated by just a few eager students. Consequently, the overwhelming majority of the students do not have a chance to speak. By dividing my upper-level classes into teams of five students, I facilitate small-group discussions and allow even the shy students to actively participate. While the sciences and engineering have been pioneers in team-based learning, the Humanities have fallen far behind. Pedagogical research has shown that students learn more effectively when they are forced to do more than simply take lecture notes.¹ By making teamwork an integral part of my upper-level courses, my students better retain and understand the course materials. My experience has shown that while some of my students resist this model (less than 25%), preferring traditional lecture methods, the overwhelming majority welcome the opportunity to work in small groups because it affords them a chance to manipulate and directly discuss the work of leading scholars in the field. I first implanted team-based learning during the Fall of 2011 in an upper-level course: "The History of Tudor & Stuart England." At the end of that semester, I collected feedback from 51 students, with over 70% of respondents reporting that team work was beneficial to their learning outcomes. During the Fall of 2012 I am reprising the class on Tudor & Stuart England, and will again solicit anonymous feedback about the experience from the 36 students who are enrolled in the course.

¹ Michael Francis Johnston & Stavros N. Karageorgis, "Advancing the Pedagogy of Student Teamwork: Development and Assessment of the TEAM Rubric," *Mountain Rise, the International Journal of the Scholarship of Teaching and Learning*, vol. 5, no. 2 (Spring 2009): 1-22; and Barbara A. Oakley, Darrin M. Hanna, Zenon Kuzmyn, and Richard M. Felder, "Best Practices Involving Teamwork in the Classroom: Results From a Survey of 6435 Engineering Student Respondents," *IEEE Transactions on Education*, vol. 50, no. 3 (August 2007): 266-72.

The 21st Century Pedagogical Educational Approach and Learning Model

R. Lee Viar IV, *College of Business and Management, Colorado Technical University*

All too often, the mentality of teaching focuses on “lecture the student and they will learn” and this is not true today in our environment at all. Regardless of the learning platform, the student demands and should receive a participatory education and one that draws upon their lived experiences, both personally and professionally. This facet of teaching can nurture and facilitate the learners with a proactive and interactive approach. As faculty, it is the fiduciary duty to provide the most effective and efficient education experience for the learners in the classroom setting, regardless if it is the traditional classroom setting or the virtual online classroom environment. Yet, this cannot be achieved by the faculty alone, it requires full support and backing of the leadership of the educational institution. Having the ability to successfully identify those desired opportunities and capitalize upon them is the real challenge. Taking advantage of technology that was not previously available or affordable to the typical learner should be viewed as a tool, not a replacement to solid teaching and educational skills. However, in this age of instant access to information, it is crucial for the professors of today to “gain” access to their learners in order to draw upon their professional and personal experiences to heighten the learning opportunities and enhance and nurture the learning process.

The Effect of Crib Sheet Use on Student Exam Performance

Timothy B. Hartman, *Engineering Science and Mechanics, Virginia Tech*

A common practice in math-intensive courses, such as physics or engineering courses, is to allow students to use an aid on exams. These aids range from an instructor-provided formula sheet to student-created sheets. The literature is divided on the effectiveness of these so-called “crib sheets” in aiding the students' performance on a particular exam or the class in general. Hamed (2008) and Chang (2012) found some evidence that students performed better when a crib sheet was used compared to either a textbook or no aid. Dickson and Miller (2005) and Whitley Jr. (1996) saw no difference in exam scores between students using a crib sheet and those using no aid. Others have argued against the use of crib sheets from an educational perspective but give no empirical evidence as to their effectiveness. The current study examines two research questions within the context of an introductory mechanics course: Does the content of a student's crib sheet correlate to that student's exam performance? Does a student's dependence on a crib sheet correlate to that student's exam performance?

Students enrolled in one section of Mechanics of Deformable Bodies in the Fall of 2012 at Virginia Tech were allowed to use self-provided crib sheets for use on three mid-term examinations. While restricted to a single side letter-sized sheet of paper, students were able to include whatever information they desired on their crib sheets. Additionally, surveys were given after each exam to determine student perception of the helpfulness of their crib sheet. Results of the data from each exam were presented to the students prior to the subsequent exam, while tracking individual performance through the semester. Findings and conclusions have yet to be determined but will be presented at the conference.

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The Prospective Roles of University Education on the Light of Challenges of Knowledge Society

Hatem Farghaly Dahy Gad, *Aswan Faculty of Education*

The human beings rush towards scientific, technological, political, economical, cultural and environmental changes with the beginning of third millennium, under a new universal system, These great changes force the Egyptian society to go up with them, especially with the globalization.

We also should understand and realize its value according to the needs of developments in Egypt . So, Improving the educational system becomes an important aim and all efforts should be doubled to achieve this goal. To achieve this goal, we should prepare the university education system on Egypt to fit the requires of the 21st century. We should make the universities with high levels and qualifies to be able to go up with the great and new changes in the society.

The Egyptian Universities should continue in developing and improving the educational programmers. Also, to continue in improving the educational or research procedures, or through its strong and deep relationships with the society, or contributing in solving its problems and give a hand in its development systems, We can' t do without the great role of the universities under these three jobs (Instruction - Research- Services) to achieve the advantages of the age of information .

The History of Distance Education in West Africa: A Critical Appraisal

Titilola Obilade, *Learning Sciences and Technology, Virginia Tech*

The purpose of this paper was to trace the historical background of Distance Education (DE) in West Africa and to examine the challenges. Distance education metamorphosed into e-learning (Sangra, Vlachopoulos & Cabrera, 2012). The history of distance education can be traced back to the pre-internet era where communication of learning materials was by correspondence through postal mail or other non-electronic means. The Timbuktian scholarship started as far back as the 12th Century and included jurisprudence, Islamic education as well as grammar (Saad, 1983). Today, one of the challenges of distance education in West Africa is the prohibitive cost of hardware.

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The Model of Professional Competence of Future Environmentalists

Yuliya Rybalko & Nataliya Ridei

Ecology and Sustainable Development, National University of Life and Environmental Sciences of Ukraine

The paper presents the content and specificity of environmentalists' professional training in accordance with the social order and the branch destination. The model of professional competence of future environmentalists and experimental results of validate proposed model under certain pedagogical conditions of professional competence have been presented.

Theory X and Y Leadership in the Classroom

Lily O'Keeffe

Theory X and Y Leadership are most often applied to business situations, but this leadership theory is applicable to online teaching. Abstract: An awareness of Theory X and Theory Y management/ leadership and a self assessment of one's own inclination toward one or the other, help leaders, including online faculty, make choices about classroom management, student communication, and community building in the online environment. In this session, participants will take an informal self-assessment to determine whether they are Theory X or Theory Y leaders. We will then discuss the impact that each has in an online class and on the online students.

Today's College Students Are So Diverse, How Do I Teach Them Effectively?

Holly C. Gould, *Department of Education, Sweet Briar College*

Today's college students bring much more diversity to college campuses than ever before. All students may not learn the same way, have the same interests, or have the same level of preparedness when they enter college. How can we equalize opportunities for students while maintaining the academic rigor? Participants will experience some ways to engage students in the content while capitalizing on the differences students bring to class.

Transforming our Teaching: Authentic and Strategic Learning with TPACK Activity Types

Susan R. Poyo, *Franciscan University of Steubenville*

Bradley M. Wilson, *Upper St. Clair School District*

David D. Carbonara, *Duquesne University*

This presentation demonstrates strategic curricular design to promote critical thinking and problem solving among teacher candidates. Students enrolled in an undergraduate social studies methods course employ specific strategies in order to create lessons aligned with NCSS/NCATE standards, CCSS, and TPACK Activity Types for Social Studies (Hofer & Harris, 2009). This model provides examples of curriculum development conducive to leadership training for pre-service teachers, effective 21st century instruction and an adherence to standards for national accreditation. Pre service teachers were asked to take ten lesson plans currently being used in a public middle school social studies classroom and transform them by utilizing technology in a pedagogically sound manner. Each of the lesson transformations represented one of the ten NCSS-NCATE themes for integrated middle school social studies. This promising practice allowed numerous opportunities to collaborate with their peers and design lessons that emphasized clear learning objectives aligned to authentic assessments, attention to the management of time and materials, and plans for differentiation for all learners. This curricular practice provided the necessary multiple opportunities for pre service teachers to practice 21st century design principles and to collaborate to solve authentic problems (Koehler & Mishra, 2008). The need to equip pre service teachers with essential knowledge in content, pedagogy and technology is well known. Teachers tend to teach as they were taught, yielding an entire generation of new teachers unfamiliar with the nuances of authentic, purposeful and deliberate uses of technology to enhance content (Lee, 2008). This practice of lesson plan transformation is content centric, which better equips pre service teachers to teach with a tool that meets content goals (Koehler & Mishra, 2005).

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Transporting Literature to New Realms of Learning

Ruth Derrick, *Appalachian Studies Program, Radford University*
 Dana Cochran, *ASPECT, Virginia Tech*
 Kathy Combiths, *English, Virginia Tech*

Literature classes have long existed for the purpose of carrying student readers to new places, real and imaginary, where they can learn values, observe conflicts, and reach new heights of understanding. But isolating literature in classes with an English prefix is short sighted. In *the International Journal of Learning*, Barbara Buedel draws together scholarly rationale for moving literature to other class spaces including history and interdisciplinary subjects. Advantages she gathers include the acquisition of “cultural knowledge,” the raising of “cultural consciousness,” and a means to help students improve their “critical thinking skills (2006, p. 333).” This poster will demonstrate how literature can be injected in other class settings. Techniques include deepening the understanding of little known historical events by giving voice to people who lived through those times (Diane Gilliam’s *Kettle Bottom* gives perspective to the Coal Mine Wars of the 1920s); demonstrating the deep seated beliefs of a given time and place (the importance of folklore as expressed in Ron Rash’s *One Foot in Eden*); moving beyond lecture rhetoric to educate students about the values of a region (significance of classic poems like “Heritage” to exemplify the importance of place in Appalachia); energizing students to action (reading poetry that underlines the destruction of Mountain Top Removal); highlighting the specific challenges minorities face (aptly shown in Frank X Walker’s *Affrilachia*). These methods emphasize the “showing versus telling” often preached in writing classes. The poster will elucidate both the methods of introducing literature in places other than the English literature classroom as well as the *benefits* of this choice for the students and their overall learning by using examples from the presenters’ own experience.

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Trying to Identify Just Which Teaching Practices Are Learning-Centered by Matching Faculty Members’ Epistemological Beliefs to Their Teaching Practices

Susan Polich, *Office of Professional Staff Affairs, Carilion Clinic*

There has been resurgence in the call for learning-centered teaching in the last thirty years. Why has learning-centered teaching become so popular? Several reasons can be cited, including learning-centered teaching’s connection to deep learning and its consistency with the current theory of how people learn.

With this resurgence, faculty members might benefit from knowing which teaching practices have been identified as learning-centered so that they can employ these practices with greater assurance. A number of studies report on what are thought to be learning-centered practices, including utilizing teaching activities that allow interaction between students and the material, making students responsible for learning, and aligning teaching methods with course objectives. However, there is little evidence that directly identifies specific teaching practices as either learning or teacher centered. It was the purpose of this study to try to determine which teaching practices are learning-centered. We did so by first determining if faculty held learning-centered epistemological beliefs and then identifying what teaching practices they employed.

In this study, thirty-one faculty members from a large, public institution who were identified by their peers to be learning-centered first had their epistemological beliefs examined using the Epistemic Beliefs Inventory. They were subsequently asked to report how frequently they used different types of teaching practices. Students of these faculty members were surveyed to confirm the faculty's reported teaching practices. Each of the thirty-one faculty members showed belief patterns consistent with learning-centered teaching. Most frequently used teaching practices included: 1). providing frequent feedback on student performance; 2). employing collaborative learning; 3). having clearly stated objectives; 4). encouraging students to question assumptions; and 5). understanding where students have difficulty with the course and using that information to plan instruction.

Overall, these faculty members did use teaching practices that were consistent with what the literature suggests is learning-centered teaching.

Unspeakable Subjects, Uniform Students: Rape and Ethnic Cleansing in the Non-Diverse College Classroom

Daniella Widdows, *Classics, Hampden-Sydney College*
James Frusetta, *History, Hampden-Sydney College*

This project explores techniques to teach uncomfortable subjects in classrooms with a non-diverse student group. Violence is often an abstract concept for students, a possible subject for entertainment or interest, but not something "real." The challenge of teaching about unspeakable acts (in the authors' cases, on rape and on ethnic cleansing) is to help students understand that these subjects are real — real in their own lives, in their own world, or in the lives of people they know. Diverse classrooms offer a plethora of responses and experiences, creating an environment in which students can see that, even if they have not experienced such violence themselves, it represents a fear or an experience for classmates. When the classroom is non-diverse, the professor is not able to rely upon the students to provide that variety of responses to course material. If no one in the course is directly impacted by the subject and doesn't have (or realize he has) connections with others who do, the professor must create pathways for students to understand their relationships to the topics under discussion. The presenters both teach at a men's single-sex college in which roughly 90 percent of the student body is white and 70 percent are in-state students. The proposed poster explains the challenges they found in teaching unspeakable subjects to a non-diverse classroom, as well as methods to overcome homogeneity. This project provides insight both on how classroom composition informs pedagogy, and what techniques are useful in mono-cultural student environments. These insights may have particular value for those teaching all-male classes, but the presenters believe they also have utility for other types of non-diverse classrooms.

User Preferences: Print vs E-books

Ramona H. Thiss & Rita J. McCandless, *Carilion Clinic Health Sciences Libraries*

The current trend in small health sciences library collection development is to purchase more electronic books than print books. Some libraries, including the Virginia Tech Carilion School of Medicine (VTC SOM) Health Sciences Library, offered only electronic books on opening day. The collection development plan was reconsidered when both students and faculty requested print titles to be added to the collection. Literature review revealed a correlation between information needs and preferences for formats. More specifically, user preferences for formats varied with the need for brief answers, in-depth answers, and test preparation. In order to align the collection development plan with user preferences for format, VTC SOM students and faculty were asked to complete an online survey. 44% of the students and 28% of the faculty completed the survey. Combining both student and faculty responses, for all three information needs, 35% to 52% chose likely or very likely to read both electronic and print formats. However, for finding an in-depth answer, 36% showed a strong preference for print. Likewise, when preparing for a test, 27% showed a strong preference print. The data supports the hypothesis that the number of users who prefer print format justifies purchasing both print and electronic formats.

Using a Complex Dynamical Systems View of Marital Stability and Satisfaction to Assist Doctoral Students in Understanding and Protecting Their Marriage Relationships During the Doctoral Journey

Amanda J. Rockinson-Szpakiw & Lucinda S. Spaulding, *School of Education, Liberty University*
Anita Knight, *Center for Counseling & Family Studies, Liberty University*

Gottman and Silver (1999) have completed extensive work on the marital relationship using complex dynamical systems theory; this work is germane to understanding marital satisfaction, quality, and ultimately, stability. Thus, the purpose of this presentation is to provide an overview of the literature on marital satisfaction, quality, and stability and discuss how the complex dynamical systems theory informs a more comprehensive conceptualization of these constructs. Gottman and Silver's work is then reviewed and its application, specifically their framework of the Sound Marital House, for doctoral students and their partners is discussed.

Using Film Essays to Help Students Apply Theories of Social Interactions

Scott W. Dunn, *School of Communication, Radford University*

This poster describes an assignment requiring students to watch narrative films and explain how they illustrate concepts covered in an undergraduate communication theory class. Prince (1993) has argued that film represents an iconographic medium, using real people, scenes, and interactions as raw material rather than the purely symbolic raw materials (words, paint, etc.) that make up many other art forms. This status as an iconographic medium makes film particularly useful for helping students apply communication theories because the interactions between characters in films usually mirror interactions in reality (albeit in an exaggerated fashion).

Each week, each student chose a film from a list and wrote a short essay showing how the film illustrated one of the theories covered in the course that week. Other scholars have argued for the use of films as discussion prompts in the communication theory classroom (e.g. Adler, 1995) but instead of the instructor guiding students' interpretations of the films in the classroom, this assignment requires students to view the films and connect them to the theories on their own. By developing the ability to identify theories when they are illustrated in films, students indirectly develop the ability to identify theories when they are illustrated in the students' daily lives. Qualitative assessment based on end-of-semester student evaluations suggested that students found this assignment challenging but rewarding, as it forced them to apply the theories on their own in ways that class discussions and tests do not. While this assignment was developed for a theory class in the communication discipline, the poster will discuss its possible uses in other classes that deal with theories of human interaction.

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Using Art to Support Students' Job Search Success

Michelle Wang, *Cooperative Education, Borough of Manhattan Community College*

The dilemma for college students' job search process is their overwhelming desire to locate any job; tending to focus upon impressing the interviewers rather than to satisfy their true passions. A job search can become a very instrumental, task-oriented process. And, it prevents students' opportunity to discover themselves and their life's purpose.

Learning should be a holistic process involving cognitive, affective and spiritual dimensions. Art is a most effective medium with which people can respond on an affective as well as cognitive level. This study employs the unique Himalayan art as a means to support student's job search preparation. During the semester, thirty (30) students in

career planning class visit the Rubin Museum of Art and attend a 45-minute tour. After museum visit, students prepare a reflective writing about their museum visit and experience with the Himalayan art. More importantly, students need to share how they connect at least one specific work of art with their employment search. Students' reflective writing and their chosen art work will present in poster session.

Using Open Source Technologies in the Classroom to Assist with STEM Growth in Urban Schools

Maurice Dawson, *College of Business and Public Affairs, Alabama A&M University*
Imad Al Saeed, *College of Engineering and Computer Science, Colorado Technical University*
Jorja Wright, *College of Business, Florida Institute of University*

As more urban schools continue to lose critical funding to stay alive it is essential that the students continue to remain competitive in the global market. The graduation rates of urban schools in many areas are lower than the national average. And the overall rankings globally are not in. As part of the lower graduation rates in urban schools can be attributed to issues in the household other issues are prevalent. When students of these urban schools graduate it can be assumed that their technology competitiveness in the national and global market is not complete. It is essential to get these students able to compete in needed fields of engineering and computer science as our nation is actively working hard to increase Science, Technology, Engineering, and Mathematics (STEM) fields. As the United States of America (USA) is continually seeking to maintain a strong hold in technology innovation and an effective cyber infrastructure it is clear that without the appropriate personnel to fill slots we will not achieve our goals. Our plan is to use innovative methods to prepare a generation that has been under represented with the appropriate skillsets to meet an ever growing demand. With technology costs also continuously rising Open Source Software (OSS) is a solution that allows these students to maximize their technology learning experience.

What We Can Learn from High School Students About Teaching: Transferable Lessons for College Faculty

Tod W. Burke, *College of Humanities and Behavioral Sciences, Radford University*
Stephen S. Owen, *Professor of Criminal Justice, Radford University*

We will share our teaching strategies and learning experiences based upon three years of team-teaching in the Radford University Virginia Summer Governor's School for the Humanities. We will demonstrate how these lessons can be used by college faculty to transform their classes, including: challenging of students by professors; challenging of students by students; challenging of professors by students; teaching creatively; integrating theory and practice; and providing an opportunity for students to express themselves. Participants will be guided through discussion and practice to discover innovative pedagogical strategies that can be used for student engagement.

Thursday

February 7, 2013

Poster Session B

12:10-1:30 PM

<http://www.cider.vt.edu/conference/>

A Contextual Approach to Researching and Teaching Sustainability

Eric Pappas, *Department of Integrated Science and Technology, James Madison University*

This National Science Foundation sponsored research project (EEC-#115872) studied and assessed ways in which sustainability instruction in five contexts can be integrated into existing instructional material in engineering, science, social science, education, communications, and English. We employed a systems approach to integrating instruction in five sustainability contexts (environmental, social/cultural, economic, technical, individual) into *existing* material in eight courses. We employed an instructional approach that focuses on aligning individual values and behaviors. The final deliverable of this research will be a low cost, scalable, and transferable “global model” of research, instructional integration, and assessment. A principle objective of this NSF grant is to use behaviors as learning outcomes.

A Cooperative Effort at Two Peer ACC-Institutes to Assess Common Student Misconceptions Using a Concept Inventory

Ann Stevens, Sandra Daniel, Stephen Melville, David Popham, Birgit Scharf, Florian Schubot, Richard Seyler Jr., Zhaomin Yang, *Department of Biological Sciences, Virginia Tech*
UMD Host-Pathogen Interaction Teaching Community *Department of Cell Biology and Molecular Genetics, University of Maryland, College Park*

Students often have misconceptions about key learning concepts that can prove to be a barrier to them gaining new knowledge. In the absence of instructor awareness of these misconceptions, they will persist. However, by ascertaining some of the most common misconceptions students hold prior to instruction and/or that arise during instruction, appropriate classroom intervention strategies may be developed. A two-tiered concept inventory for microbiology was developed and validated by the University of Maryland (UMD) Host Pathogen Interaction teaching group. This concept inventory has been used to assess student understanding of key concepts before and after several microbiology courses through the curriculum (from lower to higher division courses) first at the UMD and now at Virginia Tech. Through examining the open-ended student explanation to their response choice on the concept inventory, it is possible to code the common misconceptions held by students prior to them taking their first course in microbiology, General Microbiology. This stage of research has been initiated. Once prior course misconceptions are categorized, the process will be repeated with the student response data after completion of General Microbiology. This will enable a determination of what misconceptions remain after instruction and what new ones have emerged due to instruction. Similarly, misconceptions prior to and following completion of upper division classes will be studied. The faculty learning community approach used to analyze the data at the UMD has been transposed to a peer group at Virginia Tech. By engaging a group of faculty (from instructors to research-active faculty) in the process, not only will faculty expertise be developed in individual courses, but evidence-based reform can also be implemented across the curriculum. The unique peer-institution partnership that has been forged permits a determination of misconceptions held universally by students and thus broadens the applicability of the research.

A Phenomenological Study of an Interprofessional Healthcare Provider Oath

Jeannie Scruggs Garber, Sara Brown, Judy Lash, *Jefferson College of Health Sciences, Virginia Tech Carilion School of Medicine*
Abrina Schnurman-Crook, *Hollins University, Virginia Tech Carilion School of Medicine*

Literature Review/Problem Identification: Educators are charged with producing a new generation of healthcare professionals with the ability to collaborate; however, evaluating interprofessional collaborative knowledge, skills and attitudes is challenging. Jefferson College of Health Sciences nursing and physician assistant students and Virginia Tech Carilion School of Medicine medical students were enrolled in an interprofessional leadership course with curriculum objectives based on two of the core collaborative competencies as delineated by the 2011 Report of

the Interprofessional Education Collaborative Expert Panel which are values for collaboration and an understanding of the roles of other health professionals.

Methods: After IRB approval, the students were given an assignment to create an interprofessional healthcare professional's oath. The objectives of the assignment were: Analyze the values of healthcare professions in discipline specific pledges/oaths, create a common understanding of shared values for all healthcare professions, and compose an interprofessional healthcare provider oath. Groups composed an interprofessional oath within a defined time frame of 45 minutes. The documents were submitted without identifiers. Eighteen documents were analyzed. Following Colaizzi's phenomenological method of data analysis, the documents were reviewed, coded and emerging themes identified.

Results: Fifty-six significant statements from the interprofessional oaths were extracted from the transcripts and their formulated meanings were identified. These were clustered into five emerging themes: Characteristics of the Provider/Motivations for Oath, Promoting Health, The Patient, Practice Excellence, and Teamwork

Conclusion: Core shared values of interprofessional teams were identified and a framework was created for an interprofessional oath. The emergence of teamwork as a theme is a significant finding differing from previous published oaths. The 2011 Report of the Interprofessional Education Collaborative Expert Panel identifies teamwork as a core competency for collaborative practice.

Adaptive, Automated Feedback for Encouraging Adherence to Methods

Kevin Buffardi & Stephen H. Edwards, *Computer Science, Virginia Tech*

When teaching methods to students, observing their adherence while in process of completing an assignment provides better insight than only assessing a final deliverable for an assignment. To help students learn methods, they should also receive feedback so they can reflect, appraise, and develop their skills. We designed automated software that measures student adherence to Test-Driven Development (TDD)—a software development method—and provides appropriate feedback accordingly. The system uses positive, reinforcing messages to acknowledge behaviors that indicate TDD adherence. In addition, it coaches students to follow TDD practices and offers hints as rewards when students demonstrate improved adherence. We conducted an experiment over two semesters of a computer science course (N=165), where we compared results of one semester with the adaptive feedback system (n=78) to a control semester (n=87), where students received hints but no feedback or coaching on their TDD adherence. Students also replied to surveys at the conclusion of each semester to provide their opinions and attitudes about TDD. The experiment did not find statistically significant evidence that the adaptive system produced improvements in: adherence to TDD, attitude toward TDD, nor performance outcomes. However, the results provide insight into challenges to conveying value and motivating adherence to methods. Correspondingly, we identify potential for future work in improving instructional technology to encourage reflection and to strengthen motivation for adhering to methods.

Assessing a Large Free-Form Student Wiki: Asking Questions After Multiple Years of Student Work

Karen Swenson, Susan A. Hagedorn, Randy Patton, & Cheryl W. Ruggiero, *English Department, Virginia Tech*

Since the beginning of Spring 2010, hundreds of Virginia Tech students, the majority of them from the sciences, have been creating the "Virginia Tech Speculative Fiction Wiki" as part of the required work in an online course. The students are from multiple 80-person sections of the course, and the work continues across semesters and years. Each student has permission to edit, delete, or create in this large hypertext. Students are strongly encouraged to develop both structure and content with very little input from the instructors. Our stated goals as we established this assignment were (1) to create, in the students, a sense of working as part of a community and (2) to ensure that students practice collaborative writing, a skill that should be very useful in their future digital work. We believed that community would be fostered by several circumstances inherent in the assignment. Six

semesters later, well over a thousand students have worked on this hypertext. We are now assessing our assignment and goals. What have these students created? What is the level of the writing we see here? How much have they collaborated with one another? Has a community emerged? What, do we think, the students learned during this process? Combining input from student course evaluations and our own experiences, we are able to discuss and illustrate our findings.

Autoethnography as a Way to Learn Academic Skills and Increase Relevancy and Motivation

Anat Keinan, *Kaye College of Teacher Education, Beer Sheva, Israel*

In the southern area of Israel there are teachers who work in the field despite the fact that they do not have an academic degree. Nowadays the Ministry of Education obligates them to obtain a first degree. These students belong to groups either of emigrants from North Africa or members of Bedouin tribes; both groups live in small municipalities in the Negev desert. The cultural difference between them and the college creates not only a lack of knowledge but also induces a lack of motivation. The students feel that they are forced to study subjects which are not relevant to them. I have used the auto ethnographic method where students engage in research on their own lives as a way to increase relevancy and motivation. The students wrote their life stories and conducted research into the background of their own story. The research included reading as well as interviewing people, finding pictures, reading documents and so on. Using their own lives as research material created a relevancy and connection between them and the work they were doing. As a result motivation for the course increased significantly. Some students were astounded to discover that their lives were important enough to conduct research into. Some said that they discovered deep and valuable insights about themselves. They also learned how to search for information and how to evaluate the information according to their needs. All of them acquired the skills needed to write a paper and present an idea through writing. In the session I will describe the model and endeavor to reveal more insights and at the same time receive useful suggestion for improving the model.

Circumvential Pedagogy: A New Paradigm for the 21st Century

Angelo J. Letizia, *The College of William and Mary*

Public universities are under attack worldwide. The reasons for this vary, but can ultimately be traced back to the pervasive influence of neo-liberalism. Neo-liberalism is an economic theory which views all social phenomena in market terms (Peet, 2009; Slaughter & Rhoades, 2004). It has become the main paradigm of globalization (Torres, 2006). At the behest of neo-liberalism and its advocates, higher education is in the process of being transformed into a commodity. Plainly put, higher education may be the hottest market of the 21st century; in 2005 alone higher education globally was worth nearly 2 trillion dollars (Torres, 2006). In this climate, the market determines what is valued and what the market values is profit. Biotechnology and engineering have the potential to rake in the most profits, and so it is these and related fields which are prized in the neo-liberal paradigm. As such, many of the social sciences, the humanities and even forms of basic scientific research are neglected. In their neglect, many scholars have engaged in a “cannibalistic” self criticism which their neo-liberal detractors have used as proof of their inefficiency and meaninglessness (Rhoads & Torres, 2006). This very neglect however, may be the ideal situation. What this study calls for is for professors in neglected disciplines to reaffirm one of the true intents of liberal education, that of societal improvement and transformation. This is termed “circumvential” education. Scholars in different disciplines can adopt a semi-unified, dialectal approach to circumvent the neo-liberal paradigm. These scholars can use theory actively and actually *teach* their way into power. Neo-liberal globalization must not only be critiqued, but it must also be superseded. One way for this to happen is if students in neglected disciplines begin to embody humanist ideas of education, and propagate them further when they take positions of leadership.

College Students' Perceptions of Social Presence in the Virtual World Classroom

Kevin Westmoreland Bowers, *School of Communication, Radford University*

This study explored the relationship between social presence, defined as feeling connected to other participants within a mediated environment, and student-perceived learning outcomes in college courses that use a virtual world, such as Second Life, as an educational tool. Greater levels of social presence in a mediated environment may lead to a more collaborative setting, which may allow for cooperative opportunities available in a real-life classroom environment. A better understanding of the role of social presence in virtual world classes will help instructors to make the best use of their course design efforts in mediated environments.

This study used a web-based survey of 687 college students to ask about their perceptions of how they experienced social presence in a class that utilized a virtual world as an instructional tool. Survey responses were compared to a set of student-perceived learning outcomes. The results show a positive relationship between the students' feeling of social presence in the mediated environment and academic learning time, learning progress, student satisfaction, and quality of course and instructor. These results indicate that instructors using virtual worlds as an instructional tool need to construct environments that students can readily feel socially present in, so that the students may have a more enjoyable and useful learning experience.

**Formative and Design Experiments (FADE) and Systemic Design of Instruction (SDI):
A Marriage of Love, Not Necessity**

Elza H. Soares, *Curriculum and Instruction, Virginia Tech*
Mary Alice Barksdale, *Teaching and Learning, Virginia Tech*

In 2000, Drs. Lockee, Danielson, and Burton used the term "marriage of necessity" in one of their articles to describe the relationship between instructional design and interface design. In technology facilitated education, besides the common concerns with the design of effective instruction, designers and developers ought to consider the human-computer interactions needed for the delivery of the instruction. Functional interface is necessary for the feasibility and quality of the instruction. The relationship between formative design experiments (FADE) research methodology and the design of instructional interventions intended to seek solutions objective instructional problems, is a marriage of love, not necessity because, despite the fact that there other possible methodologies, this one shares the same elements and the same developmental phases as the systematic design of instruction. It is a perfect match. When we say that: "it" is goal-oriented and intervention-centered; "it" has a pragmatic nature and seeks to find a solutions for an instructional problem affecting a specific population; "it" is anchored in theory and research; "its" design counts on formative feedback from constant iterative processes of evaluation; and "it" is adaptive and flexible enough to allow adjustments of the implementation plan to the mandates of the performance environment, it is difficult to distinguish if we are describing FADE or SDI. The SDI phases (as described in the ADDIE Model) and FADE's follow similar order and purpose. This poster we will provide a visual graph with the similarities and provide an example of a recent dissertation research that used both principles.

Connecting the Dots: Food + Culture = Agriculture

Ozzie Abaye, *Crop and Soil Environmental Sciences, Virginia Tech*
Gregory Welbaum, *Horticulture, Virginia Tech*
Kang Xia, *Crop and Soil Environmental Sciences, Virginia Tech*

In 2010, a food lab was added to the traditionally lecture-based World Crops and Cropping Systems course at Virginia Tech. This is upper-division undergraduate class intended for both major and non-majors. The overall objective of the food lab, which is taught in conjunction with the lecture, is to expose students to the unprocessed crop commodity, how it is produced, consumed, and the culture surrounding its usage. On a weekly basis, students make dishes from the crops discussed in the classroom lecture. A total of 60 students, 20 students per 3 lab period, are assigned into all male, mix or female groups of 5 students each. The recipes for the food lab are generated from

the students as well as other sources and include cultures ranging from India to the American. The recipes for upcoming labs are posted on the web prior to each cooking lab. The outcome of the food lab exceeded expectations and student evaluations have been favorable. This approach gives students a greater appreciation of world crops processing, usage and preparation as nutritious food from field to fork as well a deeper understanding of other culture.

Critical Thinking Skills in a Large Lecture Class: Effects of Body Weight and Exercise Level

Deborah J. Good & Angela Anderson, *Department of Human Nutrition, Foods and Exercise, Virginia Tech*

There is growing concern about the lack of critical thinking skills (CTS) in college graduates. Using animal models, researchers have found that obesity can impair spatial learning, while intense exercise can improve cognitive ability. In humans, adults with high body mass indexes (BMIs) show impaired performance in decision-making activities, and adolescents with childhood metabolic syndrome show significantly lower math and spelling scores. Conversely, female college students undergoing short-term, intense exercise exhibit increased working memory. In this study, we tested the hypothesis that BMI (negatively) and exercise (positively) influences CTS in college-aged students. To do this we utilized a large lecture class, Metabolic Nutrition 3026 with an enrollment of 234 students (49.1% participation rate) and the *iClicker* in-class response system. Specific questions were developed which were considered either to use or not to use CTS, and students were asked these questions throughout the semester, without prior knowledge that they might be used in a research study. In addition, students were asked about their exercise and BMI level. Neither BMI nor exercise showed a significant effect on whether students answered CTS-type questions correctly. There were several confounding factors. First, students in this course self-reported high levels of weekly exercise, compared to the average American, with 84/115 (73%) of students reporting exercise of at least 2-3 times per week. In addition, there were lower numbers of obese individuals in the class, than expected of the general population, with only 2 of the 115 (1.7%) giving their self-reported BMI as obese. Thus, slight differences in CTS score were not found to be significant due to low numbers in the obese, and low exercise groups. The study will be repeated in spring 2013 to add additional participants to the study and with a slight re-design to capture true CTS scores using graded questions.

Designing Courses that Prepare Students for the Global Workplace

Svitlana Taraban-Gordon, *Centre for Teaching Excellence, University of Waterloo*

University graduates are expected to develop cross-cultural knowledge and skills during their university careers. To prepare students for the global workplace, many universities now offer various on-campus educational experiences focused on cross-cultural learning. These activities range from courses infused with cross-cultural content and perspectives to campus-wide global experience certificates. This practice session seeks to stimulate a discussion about the structure and content of the courses that prepare students for today's globalized and culturally mixed workplace. Participants will begin by brainstorming ideas about the types of courses that could help students develop global/intercultural skills. They will be introduced to a model of an online campus-wide course, *Intercultural Skills*, which is currently offered to undergraduate co-operative education students from various faculties at a Canadian university. Session participants will have an opportunity to discuss how the structure and content of the course can be adapted to meet the needs of undergraduate population on their campuses.

Developing an Autonomous Entry-Level Doctor of Physical Therapy Practitioner: The Science and Art of a Clinical Education Program

Brent Harper, Kristen Jagger, Julia Castleberry, Alex Siyufy, Adrian Aron, Renee Huth,
Ed Swanson., & Emmanuel John
Doctoral Program in Physical Therapy, Radford University

The goal of physical therapy education is to develop autonomous entry-level physical therapy practitioners who demonstrate proficiency in the cognitive, affective and psychomotor domains. Radford University's Doctor of

Physical Therapy (DPT) program's three-year, step-lock curriculum is unique in its employment of annual competency assessments to evaluate critical clinical decision-making skills. These assessments examine integration of knowledge from across the curriculum and successful completion is required for progression into each clinical internship.

Each semester, students participate in a series of foundational skills assessments that evaluate knowledge within key clinical content areas following a step-wise progression of increasingly complex instruction and practice across all learning domains. At the conclusion of each academic year, students are further assessed via comprehensive patient-simulation scenarios that integrate knowledge from across the curriculum and require proficiency in the cognitive, affective and psychomotor domains. Upon successful completion of each annual competency assessment, students advance to participate in a 12-week clinical internship. Integration of these clinical experiences throughout the curriculum fosters student growth by progressing students from foundational knowledge application to a more holistic level of critical thinking.

Radford University's DPT program is set apart from other similar curricula with the establishment of these annual competency assessments and by the inclusion of three 12-week internships throughout the curriculum. The end result is the development of an autonomous entry-level practitioner that has progressed through a unique threefold process encompassing foundational skills assessment, annual competency assessment, and clinical internship assessment.

**Do You Get More Than You Pay For? How Open-Access
Textbooks Can Facilitate Radical Re-Design of College Classes**

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Open-access textbooks are texts that are available free of charge, and most frequently online, to faculty and students (Baker, Thierstein, Fletcher, Kaur, & Emmons, 2009). These texts are becoming increasingly popular because of the significant financial savings they afford. Harley, Lawrence, Acord, and Dixson (2010) found that 95% of faculty surveyed at one university reported being willing to use open textbooks as long as the quality of the text was the same as a traditional textbook. This poster presents the results of a study of student attitudes toward and experiences with the traditional and open texts within a course that used both traditional and online open texts. Students uniformly preferred the open-access text over the traditional textbook for the course, and they preferred the content broken up into short segments ("modules") rather than typical textbook chapters. This confluence of events (availability of open texts and student preferences for shorter modules) allowed us to completely re-design one of our courses to scaffold students in becoming more self-regulated in their study habits. Data on the outcomes of this re-design will be shared in the poster at the conference.

E-Transformation: Transformative Learning Techniques to Use in Online Courses with Sensitive Topics

Jason P. Austin, Katie M. Barrow, & April Few-Demo, *Human Development, Virginia Tech*

There are plenty of courses in higher education where sensitive topics are absent. There are not many students that leave an engineering class offended and "turned off" learning. However, when sensitive topics are the center of discussion, emotional reactivity can dominate the in-class dialogue (Allen, Floyd-Thomas, & Farnsworth, 1993). This emotional dialogue has been challenging to redirect in live, face-to-face classes (Allen et al., 1993). However, online courses create space as students interact with course materials and other students through a technological medium (Baran, Correia, & Thompson, 2011). For this reason, a transformative pedagogy, which centers on shifting students' frame of reference by allowing them to connect with their experiences and critically reflect on them (Taylor, 2008), is an ideal lens in which to structure an online course that cover sensitive topics (e.g., Human Sexuality). However, this is no easy task. Many students possess experiences that make it difficult for connection to occur (Brooke, 1999). During these incidences, a reflective assignment or exercise could help in processing these experiences in order for the students to engage in critical reflection (Meyers, 2008). This poster will propose three

online assignments and exercises designed for online educators to use to encourage students to connect with their experiences as well as to critically examine them within the context of the course materials. Utilizing multiple conceptions of transformative learning, these assignments and exercises draw on students' unique experiences with (a) each other via discussion boards and (b) the course materials via online lectures, videos, as well as the course text. These assignments can aid online instructors in creating shared learning between students as well as providing a framework where positive growth can occur by connecting with multiple perspectives and processing implicit values associated with sensitive topics (Meyers, 2008; Taylor, 2008).

Educational Uses of Digital Storytelling

Amy L. Harding, *Science, Technology, and Business, Northern Virginia Community College*

For centuries, cultures worldwide used storytelling to share knowledge and traditions. Digital storytelling is the most current approach to storytelling. Research related to digital storytelling became prominent in 2005. Barrett (2005) believed supporting data related to student learning, motivation, and engagement was necessary if digital storytelling was to become an accepted educational practice. The Center for Digital Storytelling (2005) published seven elements of digital storytelling. Today, these elements are one starting point for educators beginning to use digital storytelling in the classroom. Tying the seven elements to learning styles could indicate digital storytelling enhances creativity and critical thinking in students. Robin (2008) suggests student engagement increases whether the instructor or student creates the digital story. During this poster session, participants will gain an understanding of the history of storytelling and how it evolved into digital storytelling. Today's students use technology daily, so educators may use technology to help re-create that world in the classroom. Poster session participants will discover the educational benefits of incorporating digital storytelling into the classroom. Additionally, the participants can discuss the tools available for creating and disseminating digital stories. For example, storyboards are visual representations that help storytellers outline the flow and design of the story. Lastly, the poster session will offer examples of learning projects conducive to digital storytelling and provide recommendations based on actual course curricula. At the end of the session, participants should know the basic steps in creating a digital storytelling assignment.

Effects of Extra Credit Opportunities on Students' Time Management on Large Programming Assignments

Anthony J. Allevato & Stephen H. Edwards, *Department of Computer Science, Virginia Tech*

Many different techniques have been used to encourage or force students to exercise better time management habits on programming assignments, such as staging an assignment into multiple deliverables with individual deadlines, requiring students to keep detailed records of the time they spend on assignments, and offering extra credit for early completion of an assignment. We conducted a small study that analyzed the effects of offering extra credit for early completion. Students in an introductory course were asked to complete four programming assignments throughout the term. No extra credit was offered on the first two assignments. On the final two assignments, students were offered 10 extra points (out of 100) if they finished their work at least three days before the assignment was due, in order to see if their time management habits changed as a result of this incentive. The results were surprising. While our intuition was that students would recognize the benefit of this incentive and shift their work habits accordingly, we found that there was no positive change in their time management whatsoever. In fact, students started on the assignments where extra credit was offered later than on those where it was not offered. This leads us to believe that there were other pressures or concerns that far outweigh the possibility of earning a bonus on an assignment and that this kind of incentive only helps the students who already manage their time well. Future work would be useful to determine if modifications to the experimental setup might yield better results.

Engaging Adult Learners in Designing, Implementing and Assessing the Learning Process

Alia Sheety & Arthur Melton, *Graduate Studies in Education, Cabrini College*

The following poster will present the results of a study that seek to understand students' preference toward various teaching and learning approaches. Research suggest that some of the characteristics of adult learners are; self-concept, experience, readiness to learn, and motivation. We are also aware of the importance of engagement and emotions in the learning process. The current study will try to understand how adult learners think they learn better using different levels of subject complexity. Educational Research course was chosen since it is one of the courses that raise the anxiety level and threaten the self-concept of the adult learner. The results will help reshape our practices in teaching the educational research course for graduate students.

Engaging Online Students: Threaded Discussions - Hit or Miss?

Bob Reese, *Jefferson College of Health Sciences*

Online education pioneers recognized that instructor/student interaction was lacking. Faculty-led asynchronous threaded discussions (TDs) seemed to solve the problem. Subsequently TDs were shown to encourage engagement, metacognition, instructor/student interaction, student participation, promote social presence, and enhance student satisfaction (Maurino, 2006), which encouraged student retention (Saba, 2000). Initial online degree programs were aimed at adult learners, who actively engaged TDs. By 2005, however, online education had become an integral component of undergraduate education (NCES). It is within this group that TDs seemed to have lost their luster. Undergrads reported that TDs are just a series of messages and that there is no social presence or sense of community. They complained about the lack of nonverbal clues leading to misunderstandings and misinterpretations and about the lack of dynamic interactions in asynchronous discussion (Meyer, 2003). While a review of the literature confirms that that when TDs work they fulfill their earlier promise, it also shows that in undergraduate education TD effectiveness is increasingly rare and that faculty complain of the extra time required (Mandernach, Dailey-Hebert, & Donnelly-Sallee, 2007). A comparison of four recent student surveys shows disparate results in both effectiveness and student satisfaction. A review of best practices is aimed at mitigating the *hit or miss* of TDs.

Engaging Students in Active Learning Using Concept Mapping

Rhoda Murray, Milena P. Staykova, & Christine Huson
Department of Nursing, Jefferson College of Health Sciences

Concept mapping is an active learning strategy that promotes critical thinking. As a pedagogical approach, concept mapping appeals to multiple intellects by personalizing academic content that best suits learning needs. Through concept mapping, nursing students use prior knowledge, link facts and concepts, and structure new knowledge. Research identified concept mapping is an effective strategy for engaging students in active learning. The purpose of this quality improvement project (QIP) was to compare the effects of a traditional written assignment to a concept mapping assignment based on a multiple intelligence theory. **Method:** Quantitative method using a descriptive design survey. A sample of 28 undergraduate senior nursing students who are enrolled in a clinical course completed a post- assignments survey. The survey included questions derived from Gardner's multiple intelligence theory. Gardner identified seven types of intelligences: (1) Visual-Spatial, (2) Bodily-Kinesthetic, (3) Musical, (4) Interpersonal, (5) Intrapersonal, (6) Linguistic, and (7) Logical. The students were asked to select the intelligence that best described their learning style. The survey questions addressed the assignments' effectiveness using a 6-point scale of cognitive achievements and a 4-point Likert scale. The concept mapping assignment encourages organization of content and critical thinking. Educators should consider instructional strategies stimulating variety of learning styles and multiple intelligences.

Enhancing Learning Through Curatr, a Social Learning Platform

Mary Anne Rea-Ramirez & Ravi Rathnam, *Health Science, Stratford University*

Mia MacMeekin, *Arts and Sciences, Stratford University*

Case studies, lectures, and lab experiences have traditionally been used to teach college level courses. However, new advances in learning technologies now allow integrate constructivism, social learning theory, game theory, and motivational theory to engage students as active participants in a community of inquiry. Using the online social learning based platform, Curatr, teacher/researchers at Stratford University have designed a new style of Anatomy and Physiology course that, while maintaining the rigor necessary for the medical professions, provides a learning environment that motivated students to be actively engaged, creative, and socially interactive. In the museum environment of Curatr, learners access to a wide variety of “rooms” where learning is constructed through hands on experiments, readings, games, virtual autopsies and field trips, video, and song. Students gain points for engaging in rooms on each level of the museum and also be adding new exhibits to the museum for their peers. Interaction among peers is required in every room in order to gain enough points to move up a level. In addition, each level is completed by passing a competency based assessment. Students demonstrated significant pre-post learning gains over previous classes where Curatr was not used.

Evaluating Portfolio Work with Rubrics and Other Methods of Feedback

Doris H. Kincade, *Apparel, Housing, & Resource Management, Virginia Tech*

Elizabeth H. Dull, *Home Furnishings & Interior Design, High Point University*

A conundrum for faculty teaching portfolio or other performance-based courses is encouraging creativity while evaluating performance. This dilemma is compounded when teaching college students used to receiving a trophy even when their team loses. These millennials were raised in an environment of positive praise and limited rejection (Chandler, 2012). In general, these students openly resist critique and negative feedback. However, recent research shows that the empty praise of their childhood is not effective for improvement (Chandler, 2012). Rubrics are recommended as tools for guiding and standardizing the grading process (Huffman, 1998), but is this the best method for these students? The purpose of this study was to examine grading methods, for portfolio work, with college students used to “getting the trophy.” Three methods were used over two semesters of a design portfolio course with 10 projects per class. The methods were compared based on consistency of grade outcomes, time and ease of use, and improvement in student work. Methods were tested on sample projects and were reviewed by other design faculty for consistency across methods and graders. Method one was a detailed rubric with 10 categories and five levels of details for feedback. Method two was a brief rubric with three content areas (i.e., technical, creative, professional) and room for written comments. Method three was one-to-one meetings, with a listing of the 10 categories, and feedback was given orally. Across the three methods of grading, the grade comparison showed consistency of grade outcomes. Although the detailed rubric should have been quick and easy to use – just circle the terms that fit the error, the rubric required extensive reading and never had exactly the right terms. The quick rubric required extensive writing for the instructor. The one-to-one meetings ultimately were the least time consuming and resulted in the best rework.

Examining Socrates’ “Examined Life” Principle for Higher Education and Professional Training

David R. Hostetler, *Leadership and Educational Studies, College of Education, Appalachian State University*

This particular session will explore some of the implications of Socratic principles for professional preparation programs, offer examples from the presenter’s own experiences and research, and pose questions for discussion and further consideration regarding what and how we teach. The presenter -- an education attorney, professor of educational leadership, and former executive director of the Center for Law and the Humanities -- will share experiences, research, insights, and questions arising over his twenty-five years of professional training and teaching steeped in Socratic methods and ideals.

Experiential Learning Models: Using Practitioner Research Tools in the Classroom

James E. Collier, *School of Communication, Radford University*

Experiential learning models have proven to be effective tools in achieving pedagogical objectives and delivering professional skill sets that would best qualify students for future career achievement. Various forms of experiential learning like the traditionally required internship are a critical part of different program curriculum at universities across the nation. While internships and other long term experiential learning models fulfill many of the elements of “real world” exposure, there still exists opportunities for using individual, experiential learning exercises to teach standard processes from the practitioner community. This practice session will focus on incorporating experiential learning exercises into the classroom that reflect research practices in the communication practitioner community.

Are American Public Higher Education Institutions Meeting the Needs of Minority Students? Exploring Educational Attainment of Undergraduate Minority Students in Land-Grant Institutions Across the United States

Lisa S. Hightower, *Department of Agricultural and Extension Education, Virginia Tech*

Hao Lu, *Department of Statistics, Virginia Tech*

Mary A. Marchant, *Department of Agricultural and Applied Economics, Virginia Tech*

Eric Vance, *Department of Statistics, Virginia Tech*

William Richardson, *AHNR Information Technology, Virginia Tech*

Eric Smith, *Department of Statistics, Virginia Tech*

Tim P. Mack, *School of Graduate Studies and Research, Indiana University of Pennsylvania*

In 2007, the Access to Success Initiative marked an emerging interest across the U.S. in the educational attainment of minority students in public colleges and universities. This national initiative focuses on “closing the achievement gaps that separate students of color and low-income students from their peers.” This study explores how the achievement gap between minority and non-minority undergraduate students has changed since 2007. This study investigates the degrees awarded to undergraduate students by ethnicity in 74 Land-grant higher education institutions in colleges of agriculture and life sciences across the U.S. from 2007 to 2011. The data for this study was collected from the USDA-NIFA’s Food and Agricultural Education System (FAEIS), a national database which collects student and faculty data from a wide range of higher education institutions. The study found that the number of Bachelor degrees awarded to minority students increased by 22.7% (1,188 students) from 2007 to 2011. During that time, Bachelor degrees awarded to non-minority students increased by 4.4% (1,087 students). The undergraduate degrees awarded to minorities in different program areas were compared. In natural resource programs, the largest percent increase in undergraduate degrees awarded was with Hispanic students (23.6%). In natural resources programs, the largest percent increase in undergraduate degrees awarded was with Asian students (58.5%). In family and consumer sciences programs, the greatest percent increase in undergraduate degrees awarded was also with Hispanic students (34.3%). This study shows that while the overall numbers of undergraduate degrees awarded to minority students is much lower than non-minority students, there has been a larger increase in the percentage of undergraduate degrees awarded to minority students over time. This trend in growth lends credence to the idea that targeted initiatives to increase education attainment for minority students in higher education systems may be working.

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Facilitating Online Collaboration with Google+ Hangouts

Jason Beaudin, *English and Humanities, Harrisburg Area Community College*

Educational institutions recognize the benefits of collaborative work on student success in the workplace, but online “group work” has remained generally problematic; students (and educators implementing collaborative projects) are often left with a number of disparate solutions to address the need for interpersonal connection, communication, and shared editing. As a result, students report a lack of communication and engagement with their peers and an experience that is not equivalent to working in face-to-face groups. Google+ Hangouts, a free, cloud-based program, addresses these deficiencies by combining the communication features of social media with productivity software. It supports synchronous video-conferencing for up to ten people, offering students the option of seeing each other as they talk and enhancing their interaction with the non-verbal cues that are significant in human communication. Students indicate that this increases their perceived connection with their peers and approximates the feeling of meeting “in person” despite the geographical distance between them. Within this shared virtual space, participants may edit a shared document simultaneously, streamlining workflow by reducing the need for multiple drafts to be transmitted and tracked. The session may be scheduled on Google Calendar in advance, and it can easily be recorded and shared with absent team members using built-in tools. Threaded text chat and cloud-based document storage encourage continued asynchronous interaction and productivity outside of shared meeting times. Google+ has an intuitive interface and controls, particularly for users of social media, and students quickly put it to use. Student survey responses and unsolicited testimonials, though anecdotal, support a positive evaluation of a pilot using this service for collaborative work and suggest students intend to use this free service in other courses for collaborative work.

Facilitating Students in Educational Communication

Svitlana Amelina & Nina Tverezovska

Pedagogical Sciences, National University of Life and Environmental Sciences

This practice session focuses on the solution of problems of unsuccessful communication in the classroom. We suppose that communication is the foundation for optimal quality of learning and teaching processes. It is therefore extremely important to make communication between students and teachers easier and more accessible. Facilitating student communication will allow more effective gaining of knowledge. The interpersonal communication that occurs between teachers and students should be cooperation. This session discusses the results of the analysis of the student difficulties in learning communication and ways to overcome them.

From Start to Finish: Effective Classroom Assessment Techniques

Jay Familant, *Office of Faculty Affairs, Strayer University*

With greater attention to the Higher Education Opportunity Act many colleges and universities are faced with higher levels of accountability in the quality of classroom instruction. While formative assessment is not a new topic in education, the importance of this type of assessment has risen in postsecondary education. This practice session will begin with a discussion on the usefulness of formative assessments. Afterwards, participants will learn how to pick the most appropriate classroom assessment technique or collaborative learning technique that is best suited for learning conditions. The presenter will demonstrate some the more effective types of classroom assessment techniques. Participants will brainstorm and custom design their own method and have the opportunity to critique their peers.

Higher Education in Iraq: Curriculum Change

Sara Olin Zimmerman & Melanie Greene, *Curriculum and Instruction, Appalachian State University*
Lori Mason, *IREX*

This study describes a comprehensive two-year project in Kurdistan funded by a U.S. Government reconstruction grant. The goal of this project was to determine curriculum needs in Kurdish universities. This work was analyzed using a qualitative case study approach due to the nature of this field-oriented research and the need to illustrate the complexities of the Kurdish education state of affairs. Hopefully, this research will influence public policies in Kurdistan that will promote equitable and innovative ways of teaching and learning.

How to Keep Your Sanity: Online Instructor Edition

Danielle L. Lusk, *CIDER, Virginia Tech*
Gina Mariano, *Department of Counseling and Psychology, Troy University*

We are still learning much about online teaching and learning: evidence-based best practices and long-term implications. For instructors who are used to teaching face-to-face (f2f), the different dynamics of an online classroom can be daunting. From being overwhelmed by student email to not feeling a connection with students, online instructors confront unique challenges not often faced by their f2f teaching peers. Pedagogically, material may be approached differently and instructors may field questions they are not used to handling (e.g., “Why can’t I play the video you uploaded?”). In general, online faculty must confront four major areas: (a) course structure, (b) content presentation, (c) technology, and (d) connections/relatedness. This poster presentation will highlight the challenges faced when moving from a traditional f2f classroom to an online classroom through the eyes of online instructors, addressing common complaints and problems in these four areas. Pedagogical techniques that both worked and did not work well will be shared along with useful technologies that can make organizing and conducting an online class more efficient.

Integrated Science Content and Methods: Comprehensive Courses for Pre-service Elementary Teachers

Arlene D. Vinion Dubiel, *Sweet Briar College*

The Framework for K-12 Science Education and similar documents call for teaching science to K-12 students using active approaches that emphasize the practices and nature of science as well as content. Sweet Briar College currently uses two integrated science content/methods courses for pre-service elementary teachers that models this call. Curriculum revolves around two to three big ideas of science with specific content focusing on revealing and adjusting common misconceptions. The courses match science content to an ideal teaching strategy and includes technology, engineering, and math where appropriate. Explicit discussions on the nature of science, pedagogy, age-appropriate knowledge development, and assessment practices are incorporated. The Science Teaching Efficacy Belief Instrument (STEBI-B) (Enochs and Riggs, 1990) was used to measure science teaching self-efficacy and outcome expectancy for students before and after each course. For Physical Science by Inquiry (n=7), there was a significant increase in both the Science Teaching Outcome Expectancy (STOE) (pretest mean=34.62, SD=3.0, posttest mean = 39.86, SD=6.1, p<0.05) and the Science Teaching Efficacy (PSTE) (Pretest mean = 44.9, SD=7.5, Posttest mean=51.6, SD=5.9 p<0.05) Belief subscales. For the Life Science by Inquiry course (n=6), there was no change in the mean scores for the STOE subscale, but there was a difference in the means for the PSTE subscale, although it was not significant (pretest mean=47.67 SD=5.5, post-test mean=53.5, SD=4.5, p<0.08). The preliminary results for these courses are promising but also suggest modifications that should be made, especially for the Life Science course. This proposal is also a call for opening dialog on the effectiveness and viability of integrated science content/methods courses for pre-service teachers.

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Intervisitation: Opening the Door to Innovative Strategies that Meet the Needs of a Diverse Student Body

Nelson Nunez-Rodriguez, *Natural Science, Hostos Community College*
Jacqueline DiSanto, *Education, Hostos Community College*
Isabel Feliz, *Language and Cognition, Hostos Community College*
Clarence Robertson, *English, Hostos Community College*
Angel Morales, *Humanities, Hostos Community College*
Cynthia Jones, *English, Hostos Community College*

One issue that faces instructors working among diverse populations is that they may not have developed an adequate repertoire of tactics, techniques, and resources with which to best meet the needs of their students. By providing opportunities for intervisitation with faculty who do feel competent addressing the needs of multicultural/multilingual students, faculty will be able to provide more effective instruction through peer support and example. Faculty are able to select a host professor from a shared list of volunteers. These visits typically take place interdepartmentally. The content areas of participating faculty included Acting, Chemistry, Education, English, and Language and Cognition. It is expected that dialogues will take place both before (to discuss the issue at hand and the strategy to be demonstrated) and after session (to answer any remaining questions on the part of the visitor). During the current semester, several faculty who previously participated in the intervisitation project are now working on a cross-curricular effort centered on a dramatic production at the college.

The goal of this presentation is to present a discussion of how a faculty has acquired strategies for working with traditionally under-represented populations throughout our community, including those who struggle with the English language. The objective is that attendees will be able to discuss intervisitation as a potential strategy at their site.

Investigating Motivational Orientations and Self-Regulated Learning Outcomes of Millennial College Students in the United States and India

Anuradhaa Shastri, Jen-Ting Wang, & Madhura Kesarkar

The current cohort of college students is composed primarily of “Millennials”, the generation born between 1982 and 2002. One of the most striking characteristic that millennials bring to the university classroom is that they are the first generation to grow up with digital and cyber technologies. While millennials may be more sophisticated in accessing information, discussions among college educators focus on how they learn and what motivates them. The Motivated Strategies for Learning Questionnaire (MSLQ) was developed using a social cognitive view of motivation and self-regulated learning. In this model, students’ motivation is directly linked to their ability to self-regulate their learning activities; where self-regulated learning is defined as being metacognitively, motivationally, and behaviorally active in one’s own learning processes and in achieving one’s own goals. International studies are an important source of information to describe and explain human behavior. A central question in these studies is whether research findings can be generalized across countries and cultures. The present study examines motivational orientations and self-regulated learning outcomes of millennial college students in the United States and India. The MSLQ was administered to 113 education majors in the United States and 127 in India. The questionnaire consists of 81 items. Correlations among MSLQ scales indicate that students in India group were more motivated and had lower test anxiety compared to those in the US. The US group appeared to use rehearsal strategies more than the India group. The use of deeper processing strategies like elaboration, and critical thinking were higher in the India group. Students in the US group showed higher scores on persistence at difficult tasks. Implications of these results with suggestions for faculty to help students cope with test anxiety and become more strategic about their learning will be discussed.

Leaving the “Lecture” Behind: A Student-Driven Approach to Teaching Calculus

Adam Childers & David Taylor, *Roanoke College*

We have shifted our traditional calculus course from a lecture-centered course to one that requires students to first attempt to learn new material on their own. The motivation stemmed from students leaving class with a set of notes but no understanding of the material, along with a study published by mathematics professors at Lebanon Valley College about having students read ahead in mathematics courses [5]. Lectures are intrinsically not very interactive, do not address different learning styles and can be intimidating to students, so we desired to shift most of the focus off of the instructor and onto the students.

This pedagogical change begins with the requirement that students read the section we are going to be discussing in class the night before. Since mathematics texts can be daunting, we provide study questions to guide the students through the reading [1, 4]. These questions are then the springboard for the new material and we begin each new section with an iClicker quiz [2, 3]. Following the quiz, the class has elements of a traditional lecture, but is more geared toward illustrating the main concepts of the new material. We have found this method puts an emphasis on the students taking initiative in their learning.

The instructors like the new method because classes are more interactive; discussions can be guided by what the students know or don't know, based on the live in-class iClicker quizzes. Student feedback has been very mixed. While the grade data suggests that student performance is roughly the same, students do learn to read mathematics textbooks and learn material on their own, preparing them for future courses in our major. This method of instruction could easily be extended to other subjects but it is important to note that there is a lot of work upfront.

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Making Connections: Junior Nursing Students with Elders Living in an Independent Living Facility

Kimberly Wilson, Martha Anderson, & Carolyn Lyon, *Nursing, Jefferson College of Health Sciences*
Kimberly Robinette, *Nursing, Liberty University*

Connecting junior student nurses with the elder population within the community leads to the promotion of health literacy. Oates and Zitnay define health literacy as “a patient’s ability to understand, use, and act on health information to make informed decisions regarding their healthcare”. Students were provided a unique learning opportunity to assess age related changes and disease related changes. This interaction offered them the opportunity to identify health educational needs of the elder population. The faculty led students through health literacy didactic coursework to formulate educational materials in laymen terms, addressing the needs of the residents within an independent living facility. A literature review was accessed to address the high degree of need for health literacy

education. This is a serious problem encountered throughout the United States in all age groups; however, higher rates exist within the elderly population. Educational presentations were brief in nature. The students provided an opportunity for residents to review handouts and ask questions. The various topics were well received; several topics created further opportunities to focus on individual needs, which often provided a unique opportunity for individual therapeutic conversation. Topics covered in the student presentations included medication safety, fire safety, food label interpretation, healthy meal preparation and blood pressure monitoring. Students were able to interact and build a rapport with a population outside of a hospital setting to discuss health related issues, providing guidance in consideration of health literacy, and promote healthy lifestyles. These were provided through health promotion guidance within the community. The reflection essays received from students indicated this pilot experience as positive. Elder residents provided positive feedback regarding their experience with the students, particularly noting the various educational topics, recipes, and home and fire safety evaluations. The pilot educational will be described. Subsequent semesters will expand on this educational experience.

Male Elementary Teachers: An Under Represented Minority

Michael D. Patrick & Connie Pearson, *School of Education, Liberty University*

Education prides itself upon being a culture that values diversity, yet in most elementary schools male elementary teachers are rarely found. A study completed in 2009 surveyed 231 male teachers across three different states (Tennessee, Georgia, and Missouri) and six different school districts in elementary, middle and high school to find out their specific thoughts on the lack of male elementary teachers and what factors influenced their grade level selection decision (Patrick, 2009). The study resulted with several main factors for male teachers choosing middle and high schools over elementary: Age of students, specific teaching subject, and money. Financial Incentives were stated as the number one factor that would positively influence male teachers to choose elementary education. In the study, a large portion of male teachers stated they would not consider being an elementary teacher, but most of these responses had never been inside a classroom. In a cited study, administrators believed that having male elementary teachers was crucial, but only a small percentage stated they would actually interview a male elementary candidate (Cushman, 2009).

Medical Student Education for Ultrasound Guided Injections in the Lumbar Facet Joints

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Lumbar zygapophysial (facet) joint pain is a common cause of lower back pain with a prevalence of 5-15% in general population. Currently the standard of care treatment of lumbar facet joint pain is fluoroscopy or computed tomography (CT) guided needle placement. Recently, ultrasound (US) has been proposed as a safer alternative to guide injections. As compared to fluoroscopy and CT guidance, US guidance is cheaper, faster, exposes patients to less radiation, has fewer contraindications, and is more accessible in a clinical setting. Our hypothesis is that medical students who receive less than four hours of training will approach the "expert" success rate of 95% as is demonstrated by ultrasonographers for ultrasound guided facet joint injections. Four second year medical students were educated to perform US guided lumbar facet joint injections and then performed injections with methylene blue independently. Students were given an educational hand out and a didactic/hands on experience. Student then completed 5 injections and another didactic session and then the final 5 injections. Total didactic time was less than 4 hours. Cadavers were dissected and injections were rated as successful or not. The overall success rate for injections was: 42.5% (17/40 injections successful), with an increase in success rate (60%) in the final cadaver as compared to earlier cadavers. Even though our success rate did not reach the expert rate, naïve medical students demonstrated competence in performing a conceptually and technically difficult procedure with minimal training. Ultrasonography allows students to gain mastery of procedures by providing safe immediate visual feedback. The overall success rate was decreased due to complex spinal anatomy, variable learning curves for individual students, and pre-existing pathology in the cadavers. Our project demonstrates the utility of teaching ultrasonography during medical school by allowing students opportunities to gain confidence and early mastery of technology assisted procedures.

Methodology of Organizing Practices for Future Environmentalists in Higher Education of Ukraine

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This study aimed to develop and apply methodology on organizing practices for students (future environmentalists) in higher education of Ukraine. The developed methodology incorporates all important components required in organizing practices namely forms, tools, methods etc. This methodology includes three criteria (reproductive, heuristic and creative) to evaluate student's learning process according to four levels (low, moderate, higher and highest). These criteria and levels cover a full range of assessing learning process of students after completing practices in a more comprehensive way. We applied the methodology to four Ukrainian universities. We tested the effectiveness of the methodology by using the Pirson method. Our results indicate that student's practical skills, knowledge and ability increased significantly ($\alpha=0.05$) after conducting practices according to our developed methodology.

Multicultural Grade Point Average: What We Can Learn from It

Milena P. Staykova & Christine D. Huson, *Department of Nursing, Jefferson College of Health Sciences*

Educational institutions around the world have been searching to find effective ways to maximize opportunities for students to learn how to care for a diverse ethnic and cultural population in the contemporary health care system. The healthcare professionals face many challenges in caring for patients from different backgrounds without proper academic training (knowledge), clinical preparation (skills), and self-awareness. Assessing nursing students' multicultural knowledge based on a multicultural grade point average (GPA) will hopefully increase the students' awareness of what factor has the greatest influence on the development of multicultural competency necessary for future professional roles. As defined by Pederson (2004), multicultural GPA includes assessment of three components: awareness, knowledge, and skills. The purpose of this retrospective review was to identify the variable with the greatest influence on the GPA. **Method:** Retrospective data review; descriptive, correlation analysis of 3 paired variables: multicultural awareness and GPA, multicultural knowledge and GPA, and multicultural skills and GPA. The sample included undergraduate nursing students (N=45) from a private southeastern college who were enrolled in a health promotion and disease prevention class in 2010. The students' self-perception of their multicultural GPA was assessed before starting class assignments using a multicultural learning exercise including 54 questions divided in three areas-self-awareness, knowledge, and skills. The assessment was based on the text book adapted for the class and it was considered a class assignment. The GPA was calculated using a 4-point grading scale ranging from 0 to 3; where 0 indicated no awareness, knowledge, and skills and 3 indicated the highest level of awareness, knowledge, and skills. Total points were divided by number of questions in each area and then the sum of the 3 results was divided by 3. A waiver of informed consent will be requested for this study since no identifiable information will be collected and the students have graduated and moved on. It is hoped that this study will help faculty members to identify training needs and pedagogical approaches that are necessary to cultivate multicultural competence. Educators should focus learning objectives and design instructional strategies that will promote the development of multicultural skills. New pedagogical approaches such as multicultural case studies and simulation are necessary to cultivate skills that will prepare students to provide culture-centered and competent care in an increasingly diverse society.

Multiplying the Benefits of Active Learning through Shared Reflection

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In order for active learning to occur, students must engage in both components of the active learning process: action and reflection (Bonwell & Eison, 1991; Karmas, 2006). Accordingly, in a previous CHEP session, McLeod (2011) introduced the "After-Action Report" as a tool for stimulating student reflection in all disciplines. After students

complete a major assignment, the After-Action Report provides them with an opportunity to reflect--in writing--on (a) the easiest aspect of the assignment, (b) the most challenging aspect, and (c) the strategies they used to overcome the challenge. Going beyond this first level of reflection (self-reflection), this year's session will engage participants in exploring the benefits of additional levels of reflection (shared reflection). For example, a second tier of reflection occurs when students share and discuss their reflections from the After-Action Report in small groups of three or four. Each group then produces a chart with two columns: one column lists the challenges identified by the group, and the other column lists the strategies applied to overcome each challenge. A third tier of reflection occurs when the spokesperson for each group shares the group's findings with the entire class. A fourth tier of reflection occurs when the professor reflects on these group charts, combines the data into a comprehensive chart for the entire class, and shares the chart with the students. In addition to the metacognitive benefits of multitiered reflection, through which both students and professors improve the teaching-learning process, multiple layers of reflection further multiply the benefits of an assignment by providing additional opportunities for students to develop skills in written communication, oral communication, collaboration, and presentation. Moreover, if the professor shares the comprehensive chart with students during subsequent semesters, an additional tier of shared reflection is created across the dimension of time.

Not Easily Broken: Evaluating the Effectiveness of Mentoring 101 on Student Motivation and Performance Among At-Risk Freshmen

Brian Yates, Heather Schoffstall, *Center for Academic Support and Advising Services, Liberty University*
David Holder, *School of Education, Liberty University*

The purpose of this study focuses on evaluating the effectiveness of Mentoring 101 on student motivation and performance in the first semester of the freshman year. MENT 101 (Mentoring) has been developed for incoming freshmen that desire assistance with adjustment to college. All students are encouraged to enroll with special emphasis being placed on students with weaker academic backgrounds (less than a 490 V SAT score or 19 Reading ACT score). The course is designed to allow a faculty member to work in a small group setting by establishing "break out" groups of no more than 1 instructor to 10 students per class meeting. The content also supplements a new First-Year Experience course taken by all students in their initial year. Students establish relationships through the assignment of accountability partners, and group discussions. While study strategies are addressed, so are other areas important to transition from home to school such as budgeting and career exploration. There is little data related to developmental education and the impact of intervention courses.

The study is being conducted by having participants complete MENT 101 in addition to their normal coursework. As part of the study, participants will also complete the College Learning Effectiveness Inventory (CLEI). This inventory is given during the first week and the last week of the course to measure student/University connection, motivation, study skill development, communication skill perception and general academic self-efficacy.

Observations of Instructors' Influence on Student Attention in Computer-Infused Classrooms

Mahnas Jean Mohammadi-Aragh & Christopher Williams, *Engineering Education, Virginia Tech*

Traditionally, lectures have followed the teacher-centered model, which utilizes deductive teaching methods. As an alternative, many have advocated for a shift to the less passive student-centered model, which utilizes inductive teaching methods. A key difference between the two models is the level of student engagement. Within the student-centered model, students must be actively engaged in the instructional process. Although personal computers in a classroom can encourage inattentiveness, researchers have proposed that they can also facilitate activities that re-engage students with lecture content. However, evidence for these technology supported pedagogical techniques is either conceptual or relies on student perceptions via end-of-the-semester surveys. In this study, we conduct naturalistic observations to directly measure attention behaviors in real-time and in conjunction with course activities. Observations were conducted to examine how technology supported pedagogical techniques influence student attentiveness. The observer, concealed as a student, attended multiple student-centered, large lectures taught by multiple instructors. The observer chose two nearby students to observe for an entire class period. Observation notes were taken every minute and included 1) summaries of the students' activities, 2) judgments of whether or not

the students were paying attention, 3) observations of the students' top-most (i.e., active) window, and 4) logs of classroom activities. Observations were conducted during multiple lecture sessions that were taught by multiple instructors. Observation results indicate that various student attention patterns exist. Nonetheless, with appropriate technology supported pedagogy, instructors can influence attention and reengage students with lecture. Our results also illustrate the importance of capturing real-time attention data since a student's attention can vary widely during a single lecture.

Online Tools to Support Written Reflection in the Professional Preparation of Undergraduates

Nancy Luke, Carrie Rogers, & Kelly Tracy, *Western Carolina University*

Active reflection on practice is a common tool in the development of students entering a variety of fields (Schon, 1983; Adler, 1991). The current use of online approaches with college students in professional preparation programs is widespread as it supports interaction and discussion (McLoughlin & Mynard, 2009). This poster presents three teacher educators' use of written reflections using online discussion boards and individual blogs for face-to-face students from two points in time in their programs of study, as sophomores and as seniors. The information presented will be discussed through the lens of both descriptive and dialogic reflection (Hatton & Smith, 1995) on issues of teaching practice. We have found that engaging pre-service teachers in written reflection using asynchronous online tools can support robust thinking about topics related to the field and can encourage our students to make meaningful connections between theory and practice. These online tools are used purposefully and with a primary focus on written reflection rather than a means to reduce seat time or offer courses to students at a distance. Further, having students respond to their peers' reflective posts in the online environment in written format encourages collaborative thinking in the exploration of topics related to teaching practice. Student work samples will be offered to illustrate the usefulness of this approach to support reflection on practice in the development of pre-service teachers. The poster format will lend itself to an exchange of ideas by both presenters and attendees.

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OpenDSA: Using an Active eTextbook to Teach Data Structures and Algorithms

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We present our vision for OpenDSA, an open-source effort to create a complete online resource for Data Structures and Algorithms courses at the undergraduate level. OpenDSA goes far beyond the standard electronic books of today, being a close integration of text and images with interactive visualizations/simulations and assessment activities. The OpenDSA project is meant to proceed with broad participation from the CS Education community, with maximum flexibility on reuse of materials, and with the ability for a given instructor to pick and choose material from the collection and modify as desired. We discuss the goals of the project, the theories of change that drive us, and our technical infrastructure. Initial progress is described.

Organization of the Student Work with a Learning Expert System

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This practice session focuses on the problem of application of learning expert systems. Significant role in enhancing the activity of students is improving and developing their individual work. Under modern conditions, when the amount of necessary knowledge increases dramatically, it is important to teach students the ability to supplement their own knowledge, to navigate in the increasing flow of information. Using learning expert system allows, without canceling the existing traditional forms of training, to implement the principle of individualization of learning, and promotes active management learning. Using learning expert system in the learning process can improve its effectiveness, make the system of assessment of learning outcomes more objective and adapt the process to the level of knowledge and psychological condition of each student.

Peer Led Team Learning: Building Self-Confidence to Improve Student Performance

Melanie L. Villatoro, *Construction Management and Civil Engineering Technology*
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Peer Led Team Learning (PLTL) is a teaching technique whereby students participate in weekly workshops under the guidance of a Peer Leader. Peer Leaders are students who have successfully completed the course and have decided to take on a mentoring role. They focus on communication, group dynamics, motivation, and various learning styles. Successful implementation of PLTL requires active participation of the faculty, students, and peer leaders. Workshop modules are created by faculty and consist of challenging problems based on the weekly lectures. The goal of PLTL is to enable students to gain confidence and critical problem solving skills that will help them master the course content thereby improving their ability to succeed in subsequent courses. Civil Engineering Technology and Construction Management students take Statics in their first semester. Statics provides an introduction to the basic theory necessary for structural analysis and design, including the concepts of force, stress, strain and equilibrium. Student performance has been historically low for the department; about 50 % of students pass Statics with a grade of C or better. A large number of students transfer out of the major after the first semester; retention rates of first-time, full-time freshman fall below 40%. The department has implemented PLTL in Statics as a trial effort to turn around retention rates and improve student performance. PLTL is currently in its second semester of implementation and data indicates that students in the PLTL section developed a sense of confidence in their ability to understand the course material and performed better than those in the Control section.

Practices and Perceptions of Teachers to Assessment of Learning: The Case of Mohammed First University

Abdelali Kaaouachi, *LaREF-EST, University Mohammed First, Oujda-Morocco*

The study of assessment practices of learning in higher education is a major issue because the assessment is closely linked to teaching and learning process. However, few studies have studied the practices of teachers in evaluation of learning across higher education. Include two studies: in 1997, the Interdisciplinary Research Group in University Pedagogy (GRIPU) of the University of Montreal conducted a survey that aimed to examine the characteristics of practices and perceptions of learning assessment at the University of Montreal and its affiliated schools (Blais et al., 1997). In 2008, the Research Group in Engineering docimological and Didactics (GRIDD) from the University of Liege and the Interuniversity Research Group on Evaluation and Measurement in Education with the help of information technology and communication (GRIEMetic) from the University of Montreal proposed a replication survey of Blais et al. (1997) at an international level.

To analyze practices and perceptions of teachers in assessment of learning at the University Mohammed First of Oujda (Morocco), a survey was conducted in the month of April 2012, with the aim of understanding the diversity of practices and perceptions of teachers in terms of assessment of learning. The questionnaire, addressed to teachers, is

composed of several dimensions: the general characteristics, modalities of teaching and evaluation of the course, assessment practices of learning, and perceptions of assessment.

In the context of this conference, we recall the objectives of the study and its methodology. Then we present the main results of the survey. Then we analyze the determinants of learning assessment practices through a study of correlation between these practices and some contextual variables.

**Pre-Service Teachers as Critical Action Researchers:
A Model for Preparing Critical Multicultural Educators**

Jennifer McCloud, *Teaching and Learning, Virginia Tech*

This practice session will demonstrate how engaging PK-12 pre-service teachers in critical action research prepares them to be critical multicultural educators. The qualitative research model discussed here engages pre-service teachers in an interrogation of school structure, providing the opportunity for pre-service teachers to consider the systemic, sociocultural, and sociopolitical issues that shape PK-12 schools. School structure is conceptualized as Novak and Purkey's (2001) people, places, policies, programs, and processes. Through this research model, pre-service teachers engage in a 10-12 week qualitative research project during which they collect evidence regarding school structure in a field placement school. They analyze data within the framework of multicultural education, equity, and social justice. In this session, the research model will be shared and modeled with participants. Participants will have the opportunity to interact, apply the model, and discuss how the model can be used in teacher education programs.

Professional Seminar: Conducting Research in a Collaborative Culture

Tina Bhandari, Beth MacDonald, Jenny Martin, & Windi Turner, *Teaching and Learning, Virginia Tech*

Professional Seminar for doctoral students at Virginia Tech is a 1-credit course, 2 below the conventional courses. However, the course content covers at least 3 years' worth of experiences, knowledge, and processes compressed into a single school year. The course typically extends over 16 weeks and 24 actual contact hours with 1 professor to 7 students on average. Assignments exposed students to professional jobs in academia, resources available on campus, grant writing procedures, and aided in the trajectory and purpose of the doctoral process. The purpose of this study is to investigate doctoral students' narratives on the value they hold for seminar. Of the 8, 7 authors had dual roles in this study, researcher and participant. Blinded copies of 7 narratives were descriptively coded separately by 2 of the participant-researchers using an open coding strategy to identify the context of each narrative. Conceptual codes that emerged were repeatedly discussed in relation to the data, allowing for a constant comparative method (Glaser, 1965). "Value," the overarching theme which emerged from the narratives, included sub codes such as, use of curriculum, benefits, and established goals. Findings indicated that the overarching theme of value uncovered a relationship between 5 categories: opportunities, cohort, departmental support, overcoming obstacles, and vested interest. These findings also suggest that value from a rotating 3 year curriculum in professional seminars would establish doctoral communities and strengthen academia role-identities. Implications from this research process signify that Social Science fields would benefit further from collaborative research communities, offering multiple perspectives and biases to enrich methodological outcomes.

Pythy: Leveraging Modern Web Technologies to Improve the Introductory Computer Science Experience

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Introductory computer science courses can be notoriously difficult for students, especially for those outside of the major. There are many reasons for this, and based on our experience, we believe that the programming software used in the course plays a significant role. In a typical computer science course, students must install and configure a complex suite of tools on their own computers before they can begin programming. If these steps are not followed

exactly, problems can continue to arise even months into the course, making it even more difficult for novice students to identify the sources of errors. Furthermore, such software is frequently not designed with novices in mind, and consequently presents additional issues to the beginning programmer, such as unclear diagnostic messages related to errors in student-written code. To address these issues, we created Pythy, an entirely web-based programming environment designed to allow student submissions to be written, executed, tested, and evaluated all from within the familiar interface of a web browser. Furthermore, by integrating an open-source textbook into the software itself, we hope that students will be better equipped to handle any flagged errors in their programs as they surface. To evaluate our software, we intend to apply it to an introductory programming course for non-CS-majors that will be offered at Virginia Tech during Spring 2013.

Reflective Teaching: Utilizing Brookfield's Critical Incident Questionnaire to Obtain Student Feedback and Inform Pedagogical Practices

Caroline M. Brackette, *Counseling and Human Sciences, Mercer University-Atlanta*

Accountability in teaching is a responsibility of all educators. Though no two educators are identical, there are some commonalities in the approaches used to effectively engage students in learning and gaining the knowledge, skills, and awareness needed to ensure optimal professional efficacy. The scholarship of teaching and learning (SoTL) has been described by Potter and Kustra (2011) as a systematic study of teaching in order to inform and maximize student learning. A SoTL project in which constructivist, transparency, and ecological with service learning pedagogical practices were utilized was implemented during a 16 week course. The Brookfield Critical Incident Questionnaire was administered to students to collect feedback data on their learning experiences based on the various pedagogical practices; and to assess the effectiveness of these methods in increasing students' knowledge, skills, and awareness. A content analysis was performed to assess survey data. Results indicate that an integrative approach was viewed as most effective by student participants. Detailed examples from the project and future discussion on the chosen pedagogical methods and assignments will be discussed. The author will also discuss the goals of implementing SoTL practices and reflect on the process of engaging in a SoTL project.

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Skills to Work in Global Platform: A Case Study Approach for Educating Engineers

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Aditya Johri, *Engineering Education, School of Engineering, Virginia Tech*

The ability to work in a global world has emerged as the foremost skill for engineering students and as a result, an increasing number of research programs and institutions are devoting significant resources to prepare engineers for a global world. Although institutions continue to push this agenda forward, they are constrained in their efforts by the absence of comprehensive knowledge on global engineering work that can inform their pedagogical efforts. In particular, a systematic understanding of global work from the viewpoint of practicing engineers on global teams is absent. We know little about how globalization has changed what engineers do to work on global teams – who is this globally competent engineer we want our students to become? In this paper, we report on efforts being made by our interdisciplinary team to develop case studies for teaching engineering students skills necessary to work as part of global teams. This research and development of learning materials fills a significant intellectual gap in engineering education by building a theoretical understanding of global engineering team work to inform what we teach and how we teach. We argue that case studies which are widely used in business studies are particularly well suited to teach global skills given the inherent complexity in global environments. Any global system, organization or team is composed of various elements and any change or shift in any form affects the whole system. To analyze and understand these issues, case studies are extremely used. Case studies encourage learners to think critically about the problem and apply knowledge to solve it- like real work scenario.

SmartBDD: A High-Powered Version of Behavior-Driven Development for Education

Tung M. Dao, Sunil Kamalakar, Akshay Maloo, & Stephen H. Edwards
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Behavior-Driven Development (BDD) is a software paradigm where software features are described in plain English. All stakeholders (e.g., developers, customers) work together to write functional description of the software in structured natural language called behaviors. Developers are then required to write test cases for the described natural language. However, manually writing the test cases is tedious and error-prone. As a result, student's effort is wasted, which otherwise, would be spent on understanding and solving other important software problems. Surprisingly, none of the widely used BDD tools and frameworks addresses this issue.

In this project, we aim to provide a high-powered version of BDD where in test case generation is completely automated relieving the student from writing test cases in programming language. Hence, structured English descriptions can be executed directly as test cases on the software. Test case frameworks are inherently complex to learn for students beginning programming, and the process has little benefit for students. Our goal is to help students follow the same software paradigm without having to learn the intricate details of the underlying framework. This not only helps in reducing effort but also increases the quality and outcome of student's learning. Instructors and students involved in 101 level programming courses should greatly benefit from this automated test case generation suite. We strongly believe that this project will increase students' programming productivity and quality, by bringing in sound software engineering principles to the classroom, and eventually making BDD much more easily accessible to students.

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SoTL²: Research on Undergraduate Students as Institutional SoTL Researchers

Freya B. Kinner, *Coulter Faculty Commons, Western Carolina University*

This study investigates how second- and third-year Leadership students' (n=10) perceptions of leadership, research, and themselves as change agents shift during an elective class entitled "Leadership, Research, and Social Change." This innovative class, based on the Wabash Provost Scholars model and related research conducted at North Carolina A & T State University (e.g., Hornsby, et al., 2010), gives students opportunity as formal scholars and Principal Investigators to conduct "institutional" scholarship of teaching and learning (SoTL) research, addressing the broad retention question, "why do students stay at Western Carolina University?" Leadership students developed focus group study questions, conducted a series of focus groups, collected and analyzed data, and presented and offered suggestions to university administrators, faculty, and staff based on study results. In this context, students were asked a series of self-reflection questions to track changes in their views of leadership, research, and themselves as change agents over the semester. Coding via content analysis indicates that:

- Students felt greater confidence in themselves as change agents as the semester progressed – "I may help change or better Western Carolina University for students; I may be a voice for them."
- Students felt that conducting focus groups helped them become better leaders "...because I can now stand up for things that I know are true."

- In their post-course reflections, students described that they were surprised that their focus group study was “going to make a difference” and that “in the beginning of the semester, I didn’t think that any of this [research] would even matter to [administration]. I was wrong!”

In response to the research problem, results suggest that the students as SoTL researchers model supports the growth of students’ self-confidence as change agents and leaders. Student views of research as a means to promoting change likewise shifted over the semester.

Spiritual Development and Education: A Spiritual Needs/Motivation/Volition Framework

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Susan James, *School of Education, University of West Florida*

Laura Staal, *Department of Educational Specialties, University of North Carolina-Pembroke*

Elyse Pinkie, *School of Education, Liberty University*

This study replicates previous research by the lead author to further validate a spiritual development model based on Maslow’s Hierarchy of Needs (Maslow, 1968). The spiritual development model was validated by a Likert-scale survey that correlated spiritual needs, motivation, and volition with academic performance. Further confirmation was garnered through interviews in order to achieve a phenomenological understanding of spiritual development and capture participants’ perceptions about the roles of spirituality and religion in education. Data generation included 177 survey respondents and 10 interviewees at the University of North Carolina, Pembroke and 162 survey respondents and 10 interviewees at the University of West Florida (quantitative $n = 339$, qualitative $n = 20$). To date, transcription has been completed on only 6 of the 20 interviews, but a preliminary analysis of those interview data is discussed. Survey data analysis was conducted by correlating questions regarding students’ academic and life successes with clustered question groups that represented components of the spiritual development model using a *Pearson’s R* for multiple regression. For the interviews, phenomenological reductionism and open-coding was used to identify recurrent themes among responses. This continuing validation indicates that the components of the spiritual development model are significantly and positively correlated to one another, but not significantly correlated to academic performance. Nonetheless, valuable information about students’ spiritual needs is offered along with spiritually nourishing instructional strategies that would be practical for use by educators in any setting. The poster will depict results from both the initial research by the lead author and the replication study by the current research team for comparison.

Summer Anatomy Internships for Osteopathic Medical Students: Independent Cadaver Dissection

Richard P. Wyeth, Kenneth E. D’Amato, Igor Danelisen, & John A. Anstrom

The Edward Via College of Osteopathic Medicine, Virginia Campus

Gross anatomy is taught at the Edward Via College of Osteopathic Medicine over a period that extends through the first and second year of medical school, including a month long summer hiatus. During the 2011 summer hiatus an internship was offered to selected first year students based on both academic achievements and anatomical interests. The internship had two purposes: 1) provide students an opportunity to increase their anatomical knowledge in an area of special interest, and 2) develop expertly dissected specimens that could be subsequently plastinated and used as anatomy teaching aids in future years. Sixteen students, working individually or in small groups, chose a dissection project and worked under supervision of the authors. An anonymous survey was administered at the conclusion of the internship with 15 of 16 participants responding. Six, five-level Likert items were included in the questionnaire, which was distributed on-line. Compilation of the results indicated that: self assessment of the student’s anatomical knowledge increased by 87% when compared to perceived knowledge prior to the internship ($p < 0.05$); available facilities were adequate (73%); responsiveness of the faculty was viewed favorably (94%); available time was adequate (67%); and a majority of participants would recommend such an internship program to future students (86%). Thus, the summer anatomy internship is a valuable new adjunct to anatomy teaching that demonstrates a beneficial impact on participating students’ with well-prepared prosected specimens for plastination while providing the general medical community with well-prepared prosected plastinated specimens for education.

Supporting College Students with Asperger Syndrome

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Asperger Syndrome (AS) is an Autism Spectrum Disorder (ASD) characterized by social and communication impairments and restricted interests or stereotyped patterns of behavior. Currently, the Centers for Disease Control (CDC) estimate that 1 in 88 children is diagnosed with an ASD. As a result of increasing prevalence and early interventions, higher numbers of students with AS are entering college. Students with disabilities in elementary through high school are ensured an appropriate education by the Individuals with Disabilities Education Act (IDEA), while students are guaranteed equal access to college by the Americans with Disabilities Act (ADA). ADA focuses on preventing discrimination, not academic success. Thus, the scope of services declines sharply after students graduate high school. As a result, college and universities are being challenged to provide support and enrichment to students with AS at the postsecondary level. The burden is on the institution to determine what services would be most beneficial for their campus. College students with AS have unique needs. By definition, these students do not have intellectual impairment, yet they show deficits in other domains that significantly impair their ability to succeed in college (e.g., social skills, time management, working in groups, coping with stress, being flexible with change, hygiene). Some colleges have sought to meet these needs by providing AS-specific curricula, support groups, or mentoring programs. At a large university in the Southeastern United States, an innovative support group offers students with AS the opportunity to refine their social and college-related skills through psychoeducation and opportunities for peer interactions. Group members help choose discussion topics and community outings, which provide a non-threatening environment for practicing skills. We discuss the creation, purpose, management, and impact of this group.

Technology and Innovative Thinking: Assessing Effective Pedagogical Practices

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Innovative thinking skills are of vital importance in the context of today's global society. Despite the growing importance of innovation and critical thinking, studies show that the U.S. is not keeping up with other countries when it comes to innovative thinking. Universities have an important part to play in equipping students with the capacity to critically assess, intake, and challenge knowledge so that they may be well-prepared, active members of society. Previous research has shown that through discourse, knowledge sharing, challenging information, and other means of peer/instructor engagement, students can develop stronger innovative thinking skills. Slate enabled laptop technology such as Tablets and iPads have the potential to enable collaborative environments where peers have the opportunity to discover new concepts and challenge one another to experience a deeper level of learning. Using qualitative methods, primarily including observations, we examine how this technology can play a role in creating opportunities for students to collaborate and engage with class content. This research project focuses on observing the effectiveness of two instructors' pedagogical approaches, including use of slate technology, and how students respond to such methods of instruction. The poster will focus on the qualitative methods used to gather data through observations of students and instructors. The poster will explore the background literature, suggestions for successful qualitative methods of observing innovative thinking skills, and preliminary findings that include pedagogy that can be used to develop innovative thinking skills within a classroom.

Technology Orientation for Online Returning Professional Students

Rebecca K. Scheckler, *Radford University School of Nursing*

Technology orientation is essential to ensure success of students returning after an educational hiatus to online education. When this orientation is also online there are special challenges of presenting skills within the technologies that are the target of the orientation. Socialization and encouragement of a community of practice are an important part of this orientation. Issues that are problematized included means of assessment, enforcement of completion, enrollment procedures, and sequence of modules.

The Dialogue Journal: Developing Critical Thinking Skills in the Spanish Literature Classroom

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How can you join opposite views on a particular topic through a communicative open dialogue? The Dialogue Journal is a collaborative learning and teaching technique that help students develop their social and critical thinking skills (Barkley, Cross, Major 2005). Through this technique students exchange opinions and comments to connect one another's thoughts and questions. Furthermore, students develop the ability to agree or disagree in writing and to work collaboratively to find a possible solution to the disagreement. The task is prepared ahead of time in order to help the reader and writer understand the main ideas of the journal.

Students that engage in Dialogue Journal writing practice critical thinking, literary analysis, questioning ideas, learning to work collaboratively, language, and content (Bean 1996). The dialogue writing technique is designed to produce a response and/or reaction from the reader/learner and continue the discussion about a particular topic of the literature class. It's imperative that students understand that writing is a means of communicating an idea clearly and efficiently in order to stimulate a response for further discussion in the classroom.

Students are engaged in pairs and can work the Dialogue Journal as a homework assignment and then sent it to the professor via e-mail or be brought to class to stimulate a group discussion. The objective is to help students understand that collaborative learning takes when they combine their efforts and ideas to reach a shared agreement.

My colleague and I will present SurveyMonkey results from a Spanish 380 (The New Song Movement in Latin America) and a Spanish 323 literature class in which students are engaged constantly in collaborative writing activities.

The Power of Real-World Learning Contexts

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Scholars from many disciplines report that providing students with real-world/authentic audiences, contexts and problems to solve lead to positive results in regards to student motivation, quality of products and performances, professional competence, and transfer of knowledge and skills (Currium, 2011; Ma & Lee, 2012; Perkins & Salomon, 1988). In order to confirm, extend or challenge these findings within the field of art education, I conducted a qualitative study addressing the specific ways teaching in real-world contexts influence elementary education majors' work ethic, understanding of course content, and attitudes toward learning. For the study, I taught the same content and assigned the same projects to two sections of my art education methods course for elementary education majors, who take the course in the beginning of their professional program. The control group taught their integrated art lessons to their peers in the college classroom, and the research group taught their lessons with children in a local elementary school. I collected data through student surveys, work logs, project rubrics, and their written reflections, plus my own journal reflections based on classroom observations and interactions with students. For analysis and interpretation, I used triangulation and open coding to sort and clump central concepts that emerged from the data. Using this inductive strategy, I found that my research confirmed the educational benefits of real-world learning contexts identified by scholars in other disciplines (i.e. increased motivation, quality of performance, professional competence and transfer), but also discovered that for my students who had little to no prior experience teaching children, their work in real-world elementary classrooms had the greatest impact on their self-efficacy. In other words, they reported increased self-confidence, a greater sense of accomplishment and purposefulness, stronger teacher-identities, and a clear validation of their decision to pursue careers in education.

The Use of Grounded Theory in Higher Education: From a Methodological Perspective

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Grounded theory is a qualitative method of creating theories by analyzing the collected data inductively. Grounded theorists experience the move from being descriptive to being analytical in creating conceptual frameworks as well as remaining grounded in the data (Charmaz, 2006). Grounded theory distinguishes from other qualitative research methods by focusing on a causal process and it uses quantitative research method tools in order to ground the theory in the data (Bryant & Charmaz, 2007). We conducted a grounded theory content analysis to examine the prevalence and quality of eight published research papers during the last twelve years in three prominent higher education journals: *Review of Higher Education*, *Journal of Higher Education*, and *Journal of General Education*. Our purposes were to determine the characteristics of studies that utilize grounded theory; the themes of the rationales for using grounded theory, and the way conceptual framework were designed from the collected data. The questions examined are whether or not appropriate language and prominent references were used, whether or not the theory was a result of an inductive process, and how the theory was evolved? Most of the research articles we examined used grounded theory to reflect the researcher's interpretation of the data along with the perspectives of the participants. Although grounded theory was used for generating theory from data or for elaborating and modifying existing data through iterative cycles of open and focused coding, the researchers differed in the extent to which they followed these guiding steps to the theory and to which they grounded their findings to the data.

The Use of Team Taught Remote Science Modules to Engage Students

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Norfolk State University, Norfolk, Virginia, has partnered with the Virginia Beach Public School system to create a novel course: STM 101. Qualified high school students received college elective credit for successfully completing this course which involves separate team taught modules on Computer Science, Chemistry, Physics, Biology, Technology, Engineering, and Math. This course was taught from a central location remotely to the students at seven high schools in Virginia Beach, VA. The purpose of the program was to give the students a "taste" of the various STEM (Science, Technology, Engineering and Math) disciplines, to inform the students about STEM topics and careers and college in general. The aim was for these students to consider college as an option and specifically a STEM discipline as a major. The modules were presented by enthusiastic faculty using demonstrations, laboratory exercises, and hands-on activities to stimulate the students. Each instructor attempted to relate their specific topic to a real world application or problem. For example, the chemistry module focused in part on nuclear chemistry and the students had to address the specific advantages and disadvantages of nuclear power. This is an especially sensitive and timely topic in Virginia where the state government is considering resuming uranium mining in the western part of the state. Other topics were presented related to the other specific disciplines. The students were administered a questionnaire to assess their attitudes about STEM, college in general, etc and any changes in attitudes due to their participation in STEM 101.

Use of an Educational Social Networking Site to Promote and Teach "Teaching Presence"

Erkan Er & Michael Orey, *Learning Design, and Technology, University of Georgia*

Social networking technologies provide abundant possibilities for people to connect, share ideas. The existing literature has already proven that when social networking sites (SNSs) are integrated into instruction properly, educational achievement, student engagement, and the collaboration among students are improved. On the other hand, some limitations of SNS also are discussed since the content and all the interactions in these SNSs, such as Facebook, are not necessarily educational and can be distractive. The purpose of this study is to discuss the potentials of an SNS, called SocialLearning which is developed for solely educational purposes, in an online instruction. Briefly, this tool provides a Facebook-like wall application which comes with other education-related components. The context of the research will be an online course which aims to teach "How to Teach Online". The main intention behind the idea of using SocialLearning tool is to teach "How to Establish Teaching Presence" to

students by establishing teaching presence during the online course and letting students experience it. Garrison et al.'s (2000) describes three components for teaching presence; (1) Instructional Design and Organization; (2) Facilitating Discourse; (3) Direct Instruction. When each component is explored with details, it turns out that an SNS tool can help with addressing many concerns about establishing teaching presence with a well-implementation. In conclusion, the purpose of this submission is to present the SocialLearning tool and describe how the course is designed to utilize the SNS tool to promote teaching presence. Feedback from the researchers with various viewpoints will be very helpful for reviewing and revising the design of the course before the research study takes place.

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Using Postmodern Feminist Pedagogies to Address Sensitive Topics in the College Classroom

Katie M. Barrow, Jason Austin, & April Few-Demo, *Human Development, Virginia Tech*

A postmodern feminist pedagogy asserts equality at multiple, intersecting perspectives (Allen, Floyd-Thomas, & Gillman, 2001), and works towards creating a safe, welcoming learning environment for *all* students, especially those whose voices are noticeably absent from academia (Baber & Murray, 2001). Nested in a postmodern feminist framework, this poster session will outline various pedagogical methods that can guide instructors in interacting with students when discussing sensitive and diverse topics (e.g., human sexuality) that can arise in the classroom setting. Methods such as reflexivity, openness, self-disclosure, empowerment, and approachability will be discussed, as well as the perceived benefits and struggles of negotiating a pedagogy that can evoke tension and personal conflict in students (Sharp, Bermudez, Watson, & Fitzpatrick, 2007). Moreover, student resistance can be a roadblock when incorporating differing points of view, so it is important to understand how to address this challenge (Allen, Floyd-Thomas, & Gillman, 2001). When broaching sensitive topics, personal disclosure from students and faculty is encouraged, but common pitfalls, such as treating the classroom as a therapy session (Baber & Murray, 2001), need to be curtailed. Furthermore, this poster session will offer classroom projects and assignments (e.g., journaling) that can aid students and instructors in addressing sensitive topics (Blaisure & Koivunen, 2003).

Using Social Cognitive Career Theory to Predict Female Student Intentions to Enroll in a STEM-Related Major: Psychometric Properties of a New Hybrid Instrument

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Ryan Bezy, Alesia Hruska-Hageman, *Department of Biology, Mount Mercy University*
Jitka Stehnova, *Department of Mathematics, Mount Mercy University*
Neil Bernstein, *Department of Biology, Mount Mercy University*

Because women outnumber men in the biology and the life sciences (Carnevale, Strohl, & Melton, 2011), it is important to understand how women perceive these majors and predict whether they intend to pursue a biology-related career. Social cognitive career theory (SCCT) has been useful for predicting interest and choice of major in computing (Lent et al., 2001) and science and engineering (Byars-Winston et al., 2010). In addition, SCCT has been useful for identifying career trajectories of students in longitudinal research (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). The current study examined the extent to which female college students' attitudes towards biology and key constructs of SCCT predict female students' intent to major in biology or biology-related majors (e.g., nursing) and intent to enroll in additional biology classes. Also, it was determined whether a newly constructed questionnaire measuring elements of SCCT had acceptable psychometric properties when added to an existing measure, the Biology Attitude Scale (BAS). Participants were undergraduate women enrolled in an introductory biology course (N = 236) required for all biology-related majors. Results supported the unidimensional structure of the BAS as well as a four factor structure that included the BAS, and the three additional elements of SCCT: self-efficacy, outcome expectations, and perception of encouragement. Results indicated that predictability of criteria was improved by the addition of questions based on elements of the SCCT to a model that initially only included the

BAS. Both the BAS and the social-cognitive measures increased predictability of the criterion measures when added to a model that included ACT composite score. Implications for using this measure to help students decide to enroll in biology courses or choose a biology-related major are discussed.

Using Symposium Teaching Strategies to Address Student Needs in a Multigenerational Classroom

Rick Jakeman & Susan Swayze

Graduate School of Education and Human Development, The George Washington University

Addressing student needs in a multigenerational cohort-style classroom environment can be challenging for faculty members. This presentation will describe the challenges presented to faculty members as they implement pedagogy to address the student learning needs within classrooms of multigenerational learners. As one way to share effective practice, this session will describe the Learning Symposia teaching technique, a modified jigsaw teaching strategy, as used in cohort-based graduate education class environments. This teaching strategy uses small groups of students to explore a particular course concept through designated symposia roles. Our preliminary evaluation indicates that using this pedagogy allowed students to engage in the material in new and different ways and create flexibility for different learning preferences and levels of work experience. Students also reported positive satisfaction measures when asked about their experience. Our discussion of this pedagogy offers faculty suggestions to enhance classroom facilitation and learning among students of different generations.

Using Team-Based Learning to Teach Effective Communication and Collaboration

Eric Vance, *LISA (Laboratory for Interdisciplinary Statistical Analysis), Department of Statistics, Virginia Tech*

Team-based learning is a highly effective educational strategy that distinguishes itself by incorporating four key features to teach course content through daily teamwork, communication, and collaboration in and out of the classroom [1-2]:

- Feature 1: Students collaborate in balanced, diverse, permanent teams of 5-7 students chosen fairly and transparently by the professor.
- Feature 2: The overall course grade consists of three components: individual assessments, team assessments, and a team maintenance and peer evaluation score.
- Feature 3: Course content is split into approximately 6 modules. Each module begins with a readiness assurance process consisting of an individual test on the main concepts of the reading assignment, the same test taken immediately afterward by the team, instant feedback and inter-team discussion about the test, and a short clarifying lecture by the professor—not on material the students were able to learn themselves through the assigned readings—but on material the students need help understanding.
- Feature 4: Assured that the students are ready to engage with the course material to achieve proficiency or mastery, the remainder of the class periods focus on team application exercises that compel team members to apply course content and communicate, collaborate, debate, select, and justify the best answer choice for the exercise [2-3].

The overall goal of the 3-credit mixed undergrad and graduate course, “Communication in Statistical Collaborations” is to educate statisticians to become effective interdisciplinary collaborators. In the course, students focus on giving and receiving effective feedback; listening for understanding; structuring and leading efficient and mutually satisfactory statistical collaboration meetings; asking good questions; explaining statistics to non-statisticians; and presenting statistical results and interpretations orally, through plots and graphs, and in writing to non-statistical audiences. In conjunction with assigned readings, individual homeworks, and team application exercises, statisticians learn—by applying it every day—effective communication and collaboration.

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Utilizing Alumni to Enhance Virtual Collaboration and Cross Cultural Competencies

Ralph Charlton, *Sport Management, Hampton University*

Teaching the most current and relevant content becomes increasingly challenging as social media and new online platforms change the structure and distribution of applicable knowledge daily. Relying on a textbook for current strategies and information presents additional obstacles as they become quickly outdated especially in business related disciplines. This presentation offers discussion of best practice implications regarding classroom use of alumni to enhance needed skills in virtual collaboration and cross-cultural competency. Literature review regarding best practice in virtual collaboration will also guide interactive conversations regarding the educational practice. The Institute for the Future's *Future Work Skills 2020* report will be highlighted as a framework for this pedagogical direction.

Professional Seminar: Valuing a One-Credit Course Through the Lens of Doctoral Students

Tina Bhandari, Beth MacDonald, Jenny Martin, & Windi Turner, *Teaching and Learning, Virginia Tech*

Professional Seminar for doctoral students at Virginia Tech is a 1-credit course, 2 below the conventional courses. However, the course content covers at least 3 years' worth of experiences, knowledge, and processes compressed into a single school year. The course typically extends over 16 weeks and 24 actual contact hours with 1 professor to 7 students on average. Assignments exposed students to professional jobs in academia, resources available on campus, grant writing procedures, and aided in the trajectory and purpose of the doctoral process. The purpose of this study is to investigate doctoral students' narratives on the value they hold for seminar. Findings indicated an overarching theme of value uncovering a relationship between 5 categories: opportunities, cohort, departmental support, overcoming obstacles, and vested interest.

What's Going On? : Culturally Relevant Pedagogy and International Students in Higher Education

Dyanis Popova, *Teaching and Learning, Virginia Tech*

With an increase in the number in international students in university classrooms, professors often encounter cultural disconnects of which they may or may not be aware. These disconnects often take the form of misconceptions based on perceived cultural norms and can influence classroom instruction, student-teacher interactions, and grading as professors apply their own cultural and academic understandings to the words and actions of their students (Matsumoto, 2009). In order to facilitate the best possible learning experience for all students in the classroom, professors must be aware of the influence of their words and actions and how they may be perceived. Students from other countries may not only deal with a possible language barrier, but also bring to the classroom a variety of ideas and ideals about gender, generational interaction, academic activities and much more. Culturally relevant pedagogy (Ladson-Billings, 1995), most often discussed by K-12 educators, can be easily adapted to the university classroom in order to foster the best possible educational environment for all students, regardless of subject area. Culturally relevant pedagogy highlights the concept of self and others, social relations, and conceptions of knowledge, noting that all three influence the way that students experience the content and how/ what they learn, and can help professors adapt instruction to a variety of learning styles and interests (Gunasekera & Friedrich, 2009). This

presentation highlights some common classroom issues and ways that perceived norms and cultural assumptions can foster miscommunication in the classroom.

Why Are My Kids So Bad?: Constructing a Freshman Ethic to Promote Success and Sanity in the College Classroom

Sarah Capello, *English, Point Park University*

Each semester, students and professors spend grueling hours gleaning and imparting knowledge. Unfortunately, these long hours and degree ambitions are frequently derailed by nonacademic classroom distractions like chatting, texting, Internet surfing, absenteeism, and sleeping. Class instructors spend needless amounts of time answering emails and entertaining office visits from students who miss class, fail to submit assignments, neglect to write papers, and have, overall, no moral motivations to complete coursework above a barely passing level. Drawing on the research of Sam Eldakak (“Does Applying Ethics in Education Have an Effective Impact in the Classroom?”), Sharon Smaldino (“Classroom Strategies for Teaching Ethics”), and Barbara S. S. Hong, *et al.* (“Impact of Perceptions of Faculty on Student Outcomes of Self-Efficacy, Locus of Control, Persistence, and Commitment”), this poster postulates preemptive strategies and policies that professors can implement to instill proper behaviors and an ethical paradigm for students to follow. As Freire argues in *The “Banking” Concept of Education*, when an educator holds all knowledge, the student is reduced from an intelligent participant in the learning process to a semi-comatose sponge. If applied to the classroom ethical paradigm, we can see that a banking approach will endorse an oppressive list of classroom “dos and don’ts” with no personal connection to the students. This poster, instead, proposes a constructivist pedagogy where students set their own policies and consequences for classroom behaviors with basic guidance from the instructor. By constructing an ethic for the class, the college instructor will bypass axiological gray areas and be spared maudlin entreaties for exceptions and extensions. In turn, students will be morally and academically invested in their coursework and prepared for future courses. Designing a classroom ethic for freshmen is especially relevant and highlighted in this poster due to their general lack of experience and knowledge of university expectations.

Your Graduate Degree Should Mean Something!: Maintaining Rigor in a Fifth Year Preprofessional Masters Program

Brooke Blanks, *School of Teacher Education and Leadership, Radford University*

Ensuring rigor in preprofessional graduate programs is the focus of this practice session. Participants in this session will learn about strategies used to build critical thinking, reflective writing, research skills, and oral presentation skills with student teachers in a special education preprofessional program. The process of scaffolding students’ academic development as they transition from their senior year to a fifth year M.Ed program will be discussed and modeled by faculty. Participants will engage in dialogue with student teacher participants about their experiences with maintaining rigor in their 5-year program.

Author Index

Aagaard, Lola	81	Brackette, Caroline M.	251, 261, 291
Abaye, Ozzie	245, 274	Brand, Brenda	107, 143
Adams, Stephanie G.	206	Breneman, Daisy L.	38
Airey, Patricia	256	Brennan, Kate	147
Al Murshidi, Ghadah	167	Brent, Robert N.	216
Al Saeed, Imad	269	Brians, Craig Leonard	15
Albaili, Mohamed	245	Brill, Jennifer M.	65
Albright, Richard S.	68	Brinegar, Lelia	44
Alexander, John	120	Brown, Carolyn	34
Alexander, Michael J.	262	Brown, Sara	271
Allevalo, Anthony J.	277, 290	Bryant, Lauren H.	233
Altaii, Karim	216	Buffardi, Kevin	272
Alzahrani, Turki	248	Bunch, Lila D.	73
Amelina, Svitlana	281, 289	Burke, Tod W.	269
Amelink, Catherine	143, 294	Burrell, Darrell	239, 255
Anderson, Angela	275	Byers, Tyra	180
Anderson, Dennis M.	90	Calixte, Mario E.	65
Anderson, Martha	284	Capello, Sarah	300
Anderson, Pamela Sturm	90	Carbonara, David D.	243, 265
Anderson, Robin	25	Carhart, Elliot	218
Angel, Roma B.	5	Carter, Teresa J.	44
Anstrom, John A.	293	Castleberry, Julia	275
Aron, Adrian	275	Chang, YunJeong (Eunice)	242
Arsenault, Kendra	7	Charlton, Ralph	299
Asselin, Susan	75	Chermak, John A.	262
Austin, Jason	297	Childers, Adam	284
Austin, Jason P.	276	Chittum, Jessica R.	233
Axsom, Danny	23	Choi, Ikseon	61, 98, 162
Ayers, Kevin	239	Chowdhury, Sara	55
Baab, Lujean	158, 249	Clark, Susan F.	57
Bach, Dorothe	120	Clements, Terry L.	160
Bailey, Carol	218	Click, Amanda	73
Balthazor, Ron	180	Clouser, Sherry	124
Bañuelos-Montes, José F.	295	Coale, Jimmy	252
Barb, Christopher	243	Cochran, Dana	266
Barber, James P.	128	Collier, James E.	280
Barksdale, Mary Alice	274	Collins, Kristy	23
Barrella, Elise	25	Collison, Elizabeth	248
Barrow, Katie M.	276, 297	Combiths, Kathy	266
Bart, Austin Cory	253	Conner, Timothy W. II	81
Bartley, Aryn	223	Cornell, Karen K.	162
Barton, Alison	92	Cosgrove, Emily	137
Baum, Liesl	107, 192	Cox, Larry	75
Beach, Crystal	122	Creamer, Elizabeth	257
Bear, Brandon	143	Creamer, Elizabeth G.	36
Beaudin, Jason	68, 281	Creevy, Kate E.	162
Beaulieu, Jason Ross	199	Cromer, Mark	218
Beitzel, Brian D.	276	Cumbie, Sharon A.	48, 130
Benjes-Small, Candice	252	D'Amato, Kenneth E.	293
Bernstein, Neil	246, 297	Dabbagh, Nada	18
Bezy, Ryan	246, 297	Dallas, Apostolos P.	285
Bhandari, Tina	55, 290, 299	Dana, Susanne	225
Blakeslee, Sara E.	7	Danelisen, Igor	293
Blanks, Brooke	300	Daniel, Sandra	271
Blevins, Brenta	223	Dao, Tung M.	292
Blevins, Samantha	86	Dawson, Maurice	269
Bogner, Len	134	Dawson, Pat	63
Bohannon, Cermetrious	160	Deaton, Michael L.	216
Bowers, Kevin Westmoreland	274	Deaton, Robert	253

DeMulder, Elizabeth K.....	29	Goodall, Paul B.....	216
Derrick, Ruth.....	266	Gordon, Haley M.....	294
Dew, Dennis.....	246, 297	Gould, Holly C.....	265
Dirkx, John M.....	182	Gramling, Sandra E.....	248
DiSanto, Jacqueline.....	283	Greene, Melanie.....	282
Dodd, Bucky.....	134	Grimes, Matthew.....	225
Dokter, Christina.....	182	Grohs, Jacob.....	40
Domizi, Denise P.....	103	Guilbaud, Patrick.....	245
Donahue, Matthew.....	53	Guldin, Seth.....	143
Dorison, Adrienne.....	180	Gummerson, William M.....	5
Dounoucos, Victoria.....	15	Guramatunhu-Mudiwa, Precious.....	5
Dove, Anthony.....	111	Hagedorn, Susan A.....	272
Dredger, Katie.....	3, 122, 235	Halbstein, David.....	154
Dryden, Shannon.....	252	Hall, Monena.....	243
Dull, Elizabeth H.....	279	Hall, Simin.....	288
Dunn, Scott W.....	268	Hall, Tracy.....	243
Dunzweiler, Denise.....	178	Hamson-Utley, J. Jordan.....	53
Eads, Adrian.....	53	Handley, Mary K.....	216
Earp, Lisa.....	250	Harding, Amy L.....	277
Eddy, Pamela.....	51	Harper, Brent.....	275
Edmundson, Andrea.....	231	Harris, Charles M.....	242
Edward F. Gehringer.....	172	Harris, Matthew B.....	68
Edwards, Allison.....	46	Hartman, David W.....	55
Edwards, Stephen H.....	272, 277, 290, 292	Hartman, Timothy B.....	263
El-Adaway, Islam.....	25	Hashmi, Ghazala.....	13
Elmer, Laura.....	137	Hassenfeldt, Tyler A.....	294
Epperly, Rebecca.....	147	Hayes Horst, Paige.....	170
Epps, Susan.....	92	Helms, Jennifer L.....	57
Er, Erkan.....	296	Henderson, Jennifer.....	225
Ernst, Nicole L.....	68	Henshaw, Neal.....	243
Ervine, Michelle.....	248	Hightower, Lisa S.....	241, 280
Everidge, Jennifer.....	218	Hodge, Diane M.....	240
Familant, Jay.....	281	Hoefflerle, Mary M.....	295
Farbod, Elnaz.....	256	Hofmann, Melissa.....	63
Farquhar-Caddell, Dakota.....	294	Hogan, Amy.....	196
Fasnacht, Emily.....	9	Holder, David.....	287
Feldt, Ron.....	246, 297	Horst, Paige.....	3
Feliz, Isabel.....	283	Hostetler, David R.....	279
Few-Demo, April.....	276, 297	Howard, Barbara B.....	5, 88
Finch, Aikyna.....	255	Hruska-Hageman, Alesia.....	246, 297
Finn, Teri.....	192	Hsieh, Ma Lei.....	63
Fleenor, Matthew C.....	240	Huisman, Sarah.....	46
Flood, Jillian.....	253	Hunter, Deirdre.....	190
Flores-Silva, Dolores.....	295	Huson, Christine.....	278
Forest, Lina.....	214	Huson, Christine D.....	286
Foster, Meg.....	13	Huth, Renee.....	275
Foster, Shaun.....	154	Jagger, Kristen.....	275
Franz, Rachelle.....	9	Jakeman, Rick.....	100, 298
Frusetta, James.....	42, 267	James, Susan.....	293
Frye, Carley.....	15	James-Deramo, Michele.....	23
Gad, Hatem Farghaly Dahy.....	264	Jester, JuliaGrace J.....	68, 113
Gaikwad, Prema.....	132	John, Emmanuel.....	275
Garber, Jeannie Scruggs.....	271	Johnson, Jack.....	252
Gaskill, LuAnn.....	260	Johri, Aditya.....	291
Ghiaciuc, Susan.....	38	Jones, Brett D.....	115
Gilmore, Tracy.....	243	Jones, Cynthia.....	283
Gipson, Kyle.....	25	Jones, Susan.....	218, 247, 256
Glass, Valerie Q.....	149	Joyce, Chad.....	252
Glasson, George.....	143	Ju, Hyunjung.....	162
Goedert, James.....	31	Kaouachi, Abdelali.....	289
Gonyea, Nathan E.....	276	Kajder, Sara.....	122
Good, Deborah J.....	275	Kajfez, Rachel L.....	206

Kamalakar, Sunil	292	McCandless, Rita J.....	267
Kander, Ron.....	25	McCann, Brandy.....	149
Karabelas, John.....	25	McCloud, Jennifer.....	225, 290
Kasarda, Mary.....	107	McCreery, Ennis.....	204
Kassner, Laura.....	260	McGinnis, Eric.....	253
Katie Dredger.....	235	McLeod, Stephen G.....	286
Katz, Bryan.....	158	McNair, Lisa D.....	206
Kaufman, Eric K.....	36, 145	McNamara, John P.....	285
Kaufman, Tammie J.....	241	Meier, Carolyn.....	243, 254
Kavousi, Shabnam.....	259	Melton, Arthur.....	278
Keinan, Anat.....	261, 273	Melville, Stephen.....	271
Keith, Caleb.....	40	Mickle, Angela.....	156
Kelly, Kevin.....	198	Milacci, Fred.....	244
Kesarkar, Madhura.....	283	Miller, Patrick.....	259
Khwaja, Tehmina.....	51	Miller, Rebecca.....	243
Kilkelly, Ann.....	105	Miller, Rebecca K.....	254
Kincade, Doris H.....	279	Miller, Sara E.....	126
Kinner, Freya B.....	292	Miller, Wendy E.....	48, 130
Kitsantas, Anastasia.....	18	Milspaw, Yvonne J.....	68
Knight, Anita.....	268	Mitchell, Sherese.....	246
Knight, Dawn.....	261	Mohammadi-Aragh, Mahnas Jean.....	287
Kolitsky, Michael A.....	164	Mokri, Parastou.....	77
Kopcha, Theodore J.....	61	Mollin, Marian.....	139
Kozanitis, Anastassis.....	214	Moore, David Richard.....	212
Krackow, Mike.....	252	Moorefield-Lang, Heather.....	254
Krajnik, Sheila R.....	147	Morales, Angel.....	283
Kreye, Bettibel.....	256	Morikawa, Andy.....	40
Lacoste, Jean.....	70	Moutin, Susan M.....	141
Lash, Judy.....	271	Moyo, Lesley.....	243
Lawrence, Anne.....	243	Mukuni, Joseph.....	259
Lee, Eunbae.....	79	Munly, Kelly.....	225
Lee, Yunseok.....	162	Munson, Jennifer.....	243
Leone, Dorothy.....	253	Murray, Rhoda.....	278
Letizia, Angelo J.....	273	Murrill, Leslie.....	250
Lo, Yi-An.....	210	Mutcheson, R. Brock.....	257
Locklear, Tonja M.....	260	Nagel, Robert.....	25
Long, Thomas.....	238	Nakamura, Akiko.....	96
Loomis, Frederick.....	221	Nandy, Vaishali.....	291
Lord, Benjamin D.....	248	Neidig, Sloane.....	290
Lu, Hao.....	280	Newbill, Paula B.....	105
Lubin, Melissa Maybury.....	109	Newbill, Phyllis.....	192
Luke, Nancy.....	288	Newstetter, Wendy.....	190
Lunsford, Scott.....	38	Nicely, Sara.....	256
Lusk, Danielle L.....	282	Nichols, Michael D.....	68
Lyon, Carolyn.....	218, 284	Niewolny, Kim L.....	57
MacDonald, Beth.....	290, 299	Ninkovic, Jasminka.....	246
Mack, Tim P.....	280	Nobles, Susanne.....	235
MacMeekin, Mia.....	279	Nolan, Matthew A.....	94
Magliaro, Susan G.....	107	Nunez-Rodriguez, Nelson.....	283
Maloo, Akshay.....	292	Obilade, Titilola.....	243, 264
Marchant, Mary A.....	280	Ogier, Andi.....	243
Mariano, Gina.....	248, 282	O'Keeffe, Lily.....	265
Marlowe, Elizabeth P.....	44	Olin Zimmerman, Sara.....	282
Martin, Chris.....	143	Olson, George H.....	5
Martin, Jenny.....	235, 290, 299	Ondin, Zeynep.....	248
Martin, Jenny M.....	3	Orey, Michael.....	250, 296
Mason, Lori.....	282	Ortagus, Justin.....	221
Massey, John D., Jr.....	196	Osa, Justina O.....	184
Matusovich, Holly.....	190	Osa, Osayimwense.....	258
Mauzard, Nicole.....	257	Osmond, Chris.....	48, 130
Maynard, Katrina L.....	126	Ovink, Sara.....	23
McCalla, Larry.....	229	Owen, Stephen S.....	269

Pappas, Eric	25, 271	Sahbaz, Sumeyra	296
Pappas, Jesse	117	Samdperil, Gail	11
Paretti, Marie	190	Sánchez Sierra, Juan Carlos	166
Park, Hyojin	98, 162	Scarpa, Angela	294
Parkes, Kelly A.	21	Scharf, Birgit	271
Parrott, Kathleen	254	Scheckler, Rebecca K.	294
Patrick, Michael D.	285	Schilder, Evelien	248
Patton, Randy	272	Schirr, Gary R.	188
Pawloski, Robert	31	Schirr, Laurel E.	188
Pearson, Connie	285	Schmiedt, Chad	162
Peebles, Josh	107	Schnurman-Crook, Abrina	271
Pendleton, Leslie	23	Schoffstall, Heather	287
Penven, James	40	Schubot, Florian	271
Pierrakos, Olga	25	Seyler, Richard Jr.	271
Piilonen, Leo	143	Shaffer, Clifford A.	288
Pinkie, Elyse	293	Sharp, Melody	218, 247
Poli, DorothyBelle	240	Shastri, Anuradhaa	283
Polich, Susan	266	Sheety, Alia	59, 278
Poole, Kathleen	239	Sherman, Thomas M.	77
Popham, David	271	Shofolov, Denys	250
Popova, Dyanis	194, 254, 299	Shrestha, Shikshya	9
Porr, Shea	251	Simonetti, John	107, 143
Poulsen, Chase	256	Siyufy, Alex	275
Poyo, Susan R.	265	Skidmore, Ronald L.	81
Preston, Marlene M.	238	Sliko, Jennifer	249
Price Azano, Amy	170	Smart-Smith, Pamela	225
Putman, Michael	242	Smith Budhai, Stephanie	221
Quesenberry, Brandi	238	Smith, Eric	280
Quick, Paul	180	Soares, Elza H.	274
Quinteros de Czifra, Michelle	255	Sosa, Carolina M.	244
Quinteros, Michelle	239	Sparrow, Jennifer	139, 204
Quisenberry, William	255	Spaulding, Lucinda S.	244, 268
Radlinsky, MaryAnn G.	162	Splan, Rebecca K.	251
Rakes, Lee	115	Staal, Laura	293
Ramírez, María Isabel	201	Stallions, Maria	250
Ramirez, Mary Anne	245	Staykova, Milena	218, 256, 278, 286
Rathnam, Ravi	245, 279	Steer, George	256
Rea-Ramirez, Mary Anne	279	Stehnova, Jitka	246, 297
Rearick, Matthew	240	Stephens, Robert	40
Reese, Bob	278	Stevens, Ann	271
Ren, Michele	223	Stewart, Deidira	218
Richardson, Holly	252	Stone, Sharon	51
Richardson, Tobin	244	Stoneking, Dawn	249
Richardson, William	280	Stribling, Stacia M.	29
Ridei, Nataliya	264, 286	Strickland, Annette	247
Rieber, Lloyd P.	229	Strokal, Vita	286
Riutta, Satu	246	Summers, Teggina	86
Robbins, Claire K.	151	Sutherland, Michelle	257
Robertson, Clarence	283	Swanson, Ed	275
Robinette, Kimberly	284	Swayze, Susan	100, 298
Robinson, Alma	143	Swenson, Karen	272
Rockinson-Szapkiw, Amanda	244	Sygielski, John J.	68
Rockinson-Szapkiw, Amanda J.	268	Tang, Jeffrey D.	216
Rogers, Carrie	288	Tao, Congwu	248
Rokooeisabad, Saeed	31	Taraban-Gordon, Svitlana	275
Rosenkrantz, Sam	143	Tarnavska, Tetyana	27
Rosenzweig, Mike	107	Tashner, John H.	88
Rowe, H. Alan	296	Taylor, David	284
Ruggiero, Cheryl W.	272	Teo, Hon Jie	252
Rundell, Frida	59	Terry, Krista P.	20
Russell, Haley	223	Thiss, Ramona H.	267
Rybalco, Yuliya	264	Thompson, Jennifer L. W.	174

Thum, Sara.....	243	Wang, Michelle.....	268
Tilden, Dan.....	290	Washington, Summer S.....	94
Tilley-Lubbs, Gresilda.....	225, 256	Watson, Heather.....	25
Tilley-Lubbs, Gresilda A.....	194	Welbaum, Gregory.....	274
Titus, Megan.....	63	Westfall, Sheila.....	225
Tousman, Stuart.....	247	Wherley, Valerie.....	11
Tracy, Kelly.....	288	Whicker, Jennifer Resor.....	258
Turner, Matthew R.....	208	Widdows, Daniella.....	267
Turner, Robert L. Jr.....	227	Williams, Christopher.....	287
Turner, Scott A.....	208, 227	Wilson, Bradley M.....	265
Turner, Windi.....	290, 299	Wilson, Kimberly.....	284
Turner, Windi D.....	176	Wilson, Roxanne.....	218
Tvrezovska, Nina.....	27, 281, 289	Withrow, Amy S.....	68
UMD Host-Pathogen Interaction Teaching Community.....	271	Woleben, Christopher M.....	44
Uryasev, Oleg.....	285	Wright, Jorja.....	269
Van Patten, Susan R.....	252	Wu, Rongbin.....	65
Vance, Eric.....	280, 298	Wyeth, Richard P.....	293
Viar, R. Lee IV.....	263	Xia, Kang.....	274
Vick, Brian.....	199	Yang, Zhaomin.....	271
View, Jenice L.....	29	Yates, Brian.....	287
Villatoro, Melanie L.....	289	Yazdani, Saami.....	25
Vinion Dubiel, Arlene D.....	282	Yocum, Russell G.....	293
Waajid, Badiyyah.....	184	Yu, Rongrong.....	296
Walker, Brandy.....	229	Yu, Xi.....	241
Walker, Claire.....	73	Zakrajsek, Todd.....	72
Walker, Tracy M.....	184	Zaldivar, Marc.....	86
Walz, Jerald H.....	36	Zha, Shenghua.....	242
Wang, Jen-Ting.....	283		