

REFERENCES

- Alexitch, L. R. (1997). Students' educational orientation and preferences for advising from university professors. *Journal of College Student Development, 38*, 333-343.
- Alexitch, L. R. (2002). The role of help-seeking attitudes and tendencies in students' preferences for academic advising. *Journal of College Student Development, 43*, 5-19.
- Anderson, K.T., McClard, A.P., & Larkin, J. (1995). The Social Ecology of Student Life: The Integration of Technological Innovation in a Residence Hall. In M.A.Shields (Ed). *Work and technology in higher education: The social construction of academic computing..* (pp 141-159). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc., Publishers
- Andreas, R. E. (December,1983). Institutional Self-Study: Serving Commuter Students. In S. S. Stewart (Ed). *Commuter students: enhancing their educational experience*. New Directions for Student Services, No. 24. (pp 9-24). San Francisco: Jossey-Bass.
- Brett, P., & Nagra, J. (2005). An investigation into students' use of a computer-based social learning space: lessons for facilitating collaborative approaches to learning. *British Journal of Educational Technology, 36* (2), 281-292.
- Burrell, L. F., & Trombley, T. B. (1983). Academic advising with minority students on predominately White campuses. *Journal of College Student Personnel, 3*,121-126.
- Carswell, L., Thomas, P., Petre, M., Price, B., & Richards, M. (2000). Distance education via the internet: the student experience. *British Journal of Educational Technology, 31* (1), 29-46.
- Chando, C. M. (1997). Predicting advising style preference from student characteristics (doctoral dissertation, University of Memphis, 1997). UMI Dissertation Services, 930635.
- Chickering, A. W. (1969). *Education and identity*. San Francisco: Jossey-Bass.

- Collins, T. & Dewees, S. (2001). *Distance education: taking classes to the students*. Starkville, MS: Mississippi State University, Southern Rural Development Center.
- Crockett, J.B., & Crawford, R.L. (1989). The relationship between Myers-Briggs Type Indicator (MBTI) scale scores and advising style preferences of college freshmen. *Journal of College Student Development, 30*, 154-161.
- Crookston, B. B. (1972). A developmental view of academic advising as teaching. *Journal of College Student Personnel, 13*, 12-17.
- Distance Education at Penn State. (2005). Retrieved on May 1, 2005 from http://www.outreach.psu.edu/de/Programmatic_Vision.html.
- Distance Education Certificate Program. (2005). Retrieved on May 1, 2005 from <http://www.wisc.edu/depd/html/about.htm>.
- Ender, S.C., Winston, R.B., & Miller, T.K. (1984). Academic advising reconsidered. In R. B. Winston, Jr., T.K. Miller, S.C. Ender, T.J. Grites, & Associates (Eds.), *Developmental academic advising: Addressing students' educational, career, and personal needs* (pp. 33-34). San Francisco: Jossey-Bass.
- Fielstein, L. L. (1989). Developmental versus prescriptive advising: Must it be one or the other? *NACADA Journal, 9*, 33-38.
- Frost, S. H. (1991). Fostering the critical thinking of college women through academic advising and faculty contact. *Journal of College Student Development, 32*, 259-366.
- Gall, M.D., Borg, W. R., & Gall, J.P. (1996). *Educational research: An introduction.*: Sixth Edition: White Plains, NY: Longman Publishers USA.
- Giles-Gee, H.F. (1989). Increasing the retention of black students: a multimethod approach. *Journal of College Student Development, 30*, 196-200.

- Giles-Gee, H.F. & Kerns, S. (1998). *Advising topics: a content analysis*. Maryland State Board for Higher Education. Towson State University: Maryland.
- Gooler, Dennis D. (1987). Using Integrated Information Technologies for Out-of-Classroom Learning. In J.A. Niemi & D.D. Gooler (Eds). Summer 1987. *Technologies for learning outside the classroom*. New Directions for Continuing Education, No. 34. (pp 63-72). San Francisco: Jossey-Bass.
- Gordon, V. N. (1981). The undecided student: a developmental perspective. *Personnel and Guidance Journal*, 59, 433-439.
- Gordon, V. N. (1984). *The undecided college student: An academic and career advising challenge*. Springfield, IL: Charles C. Thomas.
- Gordon, V. N. (1994). Developmental advising: The elusive ideal. *NACADA Journal*, 14, 71-75.
- Ham, V., & Davey, R. (2005). Our first time: two higher education tutors reflect on becoming a 'virtual teacher'. *Innovations in Education and Teaching International*, 42 (3), 257-264.
- Hanna, D. E. (2000). The Distance Education/Technology-Based Universities. In Hanna & Associates (Eds). *Higher education in an era of digital competition: Choices and challenges*. (pp 117-138). Madison, Wisconsin: Atwood Publishing.
- Hara, N., & Kling, R. (2002). Students' difficulties in a Web-based distance education course: An ethnographic study. In W.H. Dutton & B.D. Loader (Eds). *Digital academe: The new media and institutions of higher education and learning*. (pp 62-84). New York: Routledge.
- Herndon, M. K. (2001). The role of family in the success of African American college students. Ph.D. diss., Virginia Polytechnic Institute and State University.

- Horn, L. J., & Berktold, J. (1998). *Profile of Undergraduates in U.S. Postsecondary Education Institutions: 1995-1996*. Washington, D.C.: Office of Educational Research and Improvement, U.S. Department of Education.
- Hybertson, D., Hulme, E., Smith, W. A., & Holton, M. (1992). Wellness in Non-Traditional-Age Students. *Journal of College Student Development*, 33, 50-55.
- Imel, S. (1998). *Distance learning: myths and realities*. Washington, D.C.: Office of Educational Research and Improvement (ERIC Document Reproduction Service No. ED426213).
- Jackson, L.A., Ervin, K.S., Gardner, P.D., & Schmitt, N. (2001). Gender and the internet: women communicating and men searching. *Sex Roles*, 44 (5/6), 363-379.
- Jacoby, B. (1989). *The student-as-commuter: Developing a comprehensive institutional response*. ASHE-ERIC Higher Education Report No. 7. Washington, DC: School of Education and Human Development, The George Washington University.
- Jones, S. (2002). *The internet goes to college: How students are living in the future with today's technology*. Washington DC: Pew Internet and American Life Project.
- June, L.N., Curry, B.P., & Gear, C.L. (1990). An eleven-year analysis of black students' experience of problems and use of services: implications for counseling professionals. *Journal of Counseling Psychology*, 37, 178-184.
- Kirkwood, A., & Price, L. (2005). Learners and learning in the twenty-first century: What do we know about students' attitudes towards and experiences of information and communication technologies that will help us design courses? *Studies in Higher Education*, 30 (3), 257-274.
- Knapper, C K. (1980). *Evaluating instructional technology*. New York: Halsted Press.

- Knefelkamp, L., Widick, C., and Parker, C. (Eds.) (1978). *New directions for student services: Applying new developmental findings*. No. 4. San Francisco: Jossey-Bass.
- Larson, R. C., & Strehle, G. P. (2001). Edu-Tech: What's a President to Do? In P.S. Goodman (Ed). *Technology enhanced learning: Opportunities for change*. (pp 21-59). Mahwah, NJ: Lawrence Erlbaum Associates Inc.
- Lewis, B., Massey, C., & Smith, R. (2001). *The tower under siege: Technology, power, and education*. Canada: McGill-Queen's University Press.
- Littleton, R. A. (2001). African American student persistence at small colleges in Appalachia: A qualitative study. Paper Presented at Association for the Study of Higher Education (ASHE). Annual Conference in Richmond, Virginia. November 15-18, 2001.
- Malaney, G. D. (2004). Student use of the internet. *Journal of Educational Technology Systems*, 33, 53-66.
- Mau, W-C., & Fernandes, A. (2001). Characteristics and satisfaction of students who used career counseling services. *Journal of College Student Development*, 42, 581-588.
- Moore, J. L. (2001). Developing academic warriors: Things that parents, administrators, and faculty should know. In L. Jones (Ed.), *Retaining African American faculty, administrators, and students in the 21st century and beyond: A tale of multiple paradigms* (pp.77-80) Herndon, VA: Stylus.
- Morahan-Martin, J., & Schumacher, P. (2000). Incidence and correlates of pathological internet use among college students. *Computers in Human Behavior*, 16, 13-29.
- National Center for Education Statistics (1998). U.S. Department of Education. *Digest of Education Statistics*. Washington, D.C.: U.S. Government Printing Office.

- Nettles, M. T. (1988). *Toward Black undergraduate student equality in American higher education*. New York: Greenwood Press.
- Niemi, J. A., & Gooler, D. D. (Summer 1987). Themes and Issues. In J.A. Niemi & D.D. Gooler (Eds). *Technologies for learning outside the classroom*. New Directions for Continuing Education, No. 34. (pp 101-108). San Francisco: Jossey-Bass.
- Pardee, C. F. (1994). We profess developmental advising, but do we practice it? *NACADA Journal*, 14, 59-61.
- Perry, W. G., Jr. (1970). *Intellectual and ethicial development in the college years*. New York: Holt, Rinehart, and Winston.
- Pyle, K. R. (June, 1984). Computers and Student Development: What Are the Possibilities? In C.S. Johnson & K.R. Pyle (Eds). *Enhancing student development with computers*. New Directions for Student Services, No. 26. (pp 5-20). San Francisco: Jossey-Bass.
- Ryan, S., Scott, B., Freeman, H., & Patel, D. (2000). *The virtual university: The internet and resource-based learning*. Sterling, VA: Stylus Publishing Inc.
- Sax, L.J., Ceja, M., & Teranishi, R.T. (2001). Technological preparedness among entering freshmen: the role of race, class, and gender. *Journal of Educational Computing Research*, 24 (4), 363-383.
- Schweitzer, A.M., Griifin, O.T., Ancis, J.R., and Thomas, C.R. (1999). Social adjustment experiences of African American college students. *Journal of Counseling and Development*, 77, 189-197.
- Sharma, P., & Maleyeff, J. (2003). Internet education: potential problems and solutions. *The International Journal of Educational Management*, 17 (1), 19-25.

- Smith, W.A.S., & Stroud, M.A. (March, 1982). Distance Education and New Communication Technologies. In C. Knapper (Ed). *Expanding learning through new communication technologies*. New Directions for Teaching and Learning, No. 9. (pp 5-22). San Francisco: Jossey-Bass.
- Tenorio, E.H. (2003). New technologies and education: challenging disappointment. *Educational Media International*, 40 (3), 209-218.
- The Carnegie Commission on Higher Education. (June, 1972). *The fourth revolution: Instructional technology in higher education*. New York: McGraw-Hill Book Company.
- Wei, Y., & Johnes, J. (2005). Internet tools in teaching quantitative economics: why gaps between potential and reality. *Journal of Further and Higher Education*, 29 (2), 125-141.
- Winston, R.B., & Sandor, J.A. (2002). Evaluating academic advising: Manual for the academic advising inventory. Athens, GA: The University of Georgia.
- Wolfe, J. S. (1993). Institutional integration, academic success, and persistence of first-year commuter and resident students. *Journal of College Student Development*, 34, 321-326.
- Young, R. & Rogers, G. (1991). The impact of an early advising program on the success of black freshmen and white freshmen. *Journal of College Student Development*, 32, 375-376.

Appendix A:

Email to Academic Departments Asking for Participation

Hello!

My name is Jason Shank and I am a second year master's student in the Higher Education and Student Affairs program at Virginia Tech. I am currently conducting a research project to investigate the online methods of academic advising used by academic departments to support the needs of their students. For this study, online academic advising has been classified as advice or information provided by an academic department obtained via the Internet to improve the student's academic experience. The three types of online academic advice considered for this study include email correspondence with an academic advisor, instant messaging or chat-based conversation between a participant and an academic advisor, and obtaining academic information from a department supported web page. Based on your academic advising standards, I have determined that your department currently provides students with some manner of online academic advising.

To collect data for this research project, I would like to distribute an online instrument to the students in your department. The instrument has been created using the Virginia Tech survey tool and consists of less than 60 items. The instrument should take less than 20 minutes to complete. My request is that you distribute the link to the online survey by email to each of your students along with an explanation of the study. I plan to make the results of this study available to all participating departments upon completion of the project. The results of the study will provide significant information to help academic departments create an online academic advising experience that is effective and appropriate for its students.

If you would be willing to help me, please reply to this email stating that you will be willing to assist with the distribution of the survey link. If you do not wish to assist in this project, a response declining the opportunity would also be appreciated. For me to proceed with

the study, I would appreciate a response from you by no later than [insert date]. Thank you for your time and help with this research project.

Sincerely,

Jason E. Shank

Appendix B:

Email Reminder to Academic Departments Asking for Participation

Hello!

One week ago I sent a message requesting your help with my current research project. I am currently conducting a research project to investigate the online methods of academic advising used by academic departments to support the needs of their students. According to my records, I have not yet received your response. For this study, online academic advising has been classified as advice or information provided by an academic department obtained via the Internet to improve the student's academic experience. The three types of online academic advice considered for this study include email correspondence with an academic advisor, instant messaging or chat-based conversation between a participant and an academic advisor, and obtaining academic information from a department supported web page. Based on your academic advising standards, I have determined that your department currently provides students with some manner of online academic advising.

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the study, I would appreciate a response from you by no later than [insert date]. Thank you for your time and help with this research project.

Sincerely,

Jason E. Shank

Appendix C:

Winston & Sandor's Academic Advising Inventory (1984)

With language modified for online advising.

4. Online advising takes an interest in my out-of-class activities and sometimes suggests activities.

A-----B-----C-----D
 very slightly
 true true

OR Online academic advising does not know what I do outside of class.

E-----F-----G-----H
 slightly very
 true true

5. Online advising assists me in identifying realistic academic goals based on what I know about myself, as well as about my test scores and grades.

A-----B-----C-----D
 very slightly
 true true

OR Online advising identifies realistic academic goals for me based on my test scores and grades.

E-----F-----G-----H
 slightly very
 true true

6. Online advising registers me for my classes.

A-----B-----C-----D
 very slightly
 true true

OR Online advising teaches me how to register myself for classes.

E-----F-----G-----H
 slightly very
 true true

7. When I'm faced with difficult decisions my online advising tells me my alternatives and which one is the best choice.

A-----B-----C-----D
 very slightly
 true true

OR When I'm faced with difficult decisions, my online advising assists me in identifying alternatives and in considering the consequences of choosing each alternative.

E-----F-----G-----H
 slightly very
 true true

8. Online advising does not know who to contact about other-than-academic problems.

A-----B-----C-----D
 very slightly
 true true

OR Online advising knows who to contact about other-than-academic problems.

E-----F-----G-----H
 slightly very
 true true

9. Online advising gives me tips on managing my time better or on studying more effectively when I seem to need them.

A-----B-----C-----D
 very slightly
 true true

OR Online advising does not give me tips on managing my time better or on studying more effectively.

E-----F-----G-----H
 slightly very
 true true

10. Online advising suggests what I should major in.

A-----B-----C-----D
 very slightly
 true true

OR Online advising suggests steps I can take to help me decide on a major.

E-----F-----G-----H
 slightly very
 true true

11. Online advising uses test scores and grades to let it know what courses are most appropriate for me to take.

A-----B-----C-----D
 very slightly
 true true

OR Online advising and I use information, such as test scores, grades, interests, and abilities, to determine what courses are most appropriate for me to take.

E-----F-----G-----H
 slightly very
 true true

12. Online advising supports my other than-academic interests and plans.

A-----B-----C-----D
 very slightly
 true true

OR Online advising does not support my interests and plans other than academic ones.

E-----F-----G-----H
 slightly very
 true true

13. Online advising keeps me informed of my academic progress by examining my files and grades *only*.

A-----B-----C-----D
 very slightly
 true true

OR Online advising keeps informed of my academic progress by examining my files and grades and by informing me about my classes.

E-----F-----G-----H
 slightly very
 true true

PART II

Consider the following activities that often take place during online academic advising. During **this academic year**, how many times have you been involved in each activity?

A=None (0 times)

C=2 times

E=4 times

B=1 time

D=3 times

F=5 or more times

How frequently have you spent time receiving online academic advice about...

14. College policies

15. Signing registration forms

16. Dropping and/or adding course(s)

17. Personal values

18. Possible majors/academic concentrations

19. Important social or political issues

20. Content of courses

21. Selecting courses for the next term

22. Planning a class schedule for the next term

23. Transfer credit and policies

24. Advanced placement or exempting courses

25. Career alternatives

26. Probation and dismissal policies

27. Financial aid

28. Identifying other campus offices that can provide assistance

29. Study skills or study tips

30. Degree or major/academic concentration requirements

31. Personal concerns or problems

32. Studies abroad or other special academic programs

33. Internship or cooperative education opportunities

34. Setting personal goals

35. Evaluating academic progress

36. Extracurricular activities

37. Job placement opportunities

38. The purposes of a college education

39. Declaring or changing a major/academic concentration

40. Time management

41. Experiences in different classes

PART III

Considering the academic advising you have participated in at this college this year, respond to the following five statements on the answer sheet using the code below.

A = Strongly Disagree **C = Agree**
B = Disagree **D = Strongly Agree**

42. I am satisfied in general with the online academic advising I have received.
 43. I have received accurate information about courses, programs, and requirements through online academic advising.
 44. Sufficient prior notice has been provided about deadlines related to institutional policies and procedures.
 45. Online advising has been available when I needed it.
 46. Sufficient time has been available during online advising sessions.

PART IV

Please respond to the following questions.

47. What is your gender?
 (a) male
 (b) female
 (c) Decline to respond
48. What is your cultural/racial background?
 (a) African American/Black (e) White/Caucasian
 (b) Hispanic American/Latino (f) Biracial/multiracial
 (c) Asian American or Pacific Islander (g) Other
 (d) Native American (h) Decline to respond
49. What was your age at your last birthday?
 (a) 18 or younger (c) 20 (e) 22 (g) 24 (i) 31 or older
 (b) 19 (d) 21 (f) 23 (h) 25 – 30
50. What is your academic class standing?
 (a) Freshman (first year) (c) Junior (third year) (e) Irregular/Transient/Special Student
 (b) Sophomore (second year) (d) Senior (fourth or more years) (f) Other than any of the above
51. What is your academic college?
 (a) College of Agriculture & Life Sciences (c) College of Engineering (e) College of Science
 (b) College of Architecture & Urban Studies (d) College of Liberal Arts (f) Irregular/Transient
 (c) College of Business (e) College of Natural Resources (g) Undecided
52. What is your current type of residency?
 (a) on campus (b) not on campus
53. Which of the following **best describes** the majority of the online academic advising you have received this academic year?
Select only one.
 (a) Advised by a web page supplied by my department on the Internet
 (b) Advised individually by email from an academic advisor
 (c) Advised individually by instant message or chat on the Internet with an academic advisor
 (d) No advising received

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54. Approximately how much time was generally spent in each online academic advising session?

- (a) less than 15 minutes (c) 31-45 minutes (e) more than 1 hour
(b) 15-30 minutes (d) 46-60 minutes

55. How many online academic advising sessions **in total** have you had during the past 6 months?

- (a) none (c) two (e) four (g) six (i) eight
(b) one (d) three (f) five (h) seven (j) nine or more

Appendix D:

Email to Students Asking for Participation

Hello!

My name is Jason Shank and I am a second year master's student in the Higher Education and Student Affairs program at Virginia Tech. I am currently conducting a research project to investigate the online methods of academic advising used by academic departments to support the needs of their students. For this study, online academic advising has been classified as advice or information provided by an academic department obtained via the Internet to improve the student's academic experience. The three types of online academic advice considered for this study include email correspondence with an academic advisor, instant messaging or chat-based conversation between a participant and an academic advisor, and obtaining academic information from a department supported web page. Based on the academic advising standards for your department, I have determined that you currently receive some form of online academic advising.

To collect data for this research project, I have created an online survey to assist with collecting data. The instrument has been created using the Virginia Tech survey tool and consists of less than 60 items. The instrument should take less than 20 minutes to complete. My request is that you please click on the link below and take a few minutes to complete the instrument. The results of the study will provide significant information to help academic departments create an online academic advising experience that is effective and appropriate for future students and yourself.

All information will be kept completely confidential. Each entry will be anonymous. Any participant who completes the survey will have an opportunity to register for one of three \$25 cash prizes. The winners of the cash prizes will be notified two weeks after the data collection period ends on [insert date]. If you have any questions please contact me at

jshank@vt.edu. Thank you for your time and help with this research project.

To participate in this study please click <insert hyperlink to survey> here to complete the instrument and to have a chance to be entered for a \$25 cash prize.

Sincerely,

Jason E. Shank