

**Profile of Health Educators in Virginia Institutions of Higher
Education: The Value Attached to Work-related Competencies**

Danylle Ranae Kunkel

Dissertation submitted to the faculty of the Virginia Polytechnic Institute and State
University in partial fulfillment of the requirements for the degree of

Doctor of Philosophy
In
Education
(Curriculum and Instruction)

Kerry J. Redican
Billie Lepczyk
Richard Stratton
James Krousas

October 11, 2007
Blacksburg, VA

Keywords: Health Educators, Employability, College Graduates, CHES Exam,
Certifications

Copyright 2007, Danylle R. Kunkel

Profile of Health Educators in Virginia Institutions of Higher Education: The Value
Attached to Work-related Competencies

Danylle R. Kunkel

(ABSTRACT)

The purpose of this study was to create a profile of the value of work-related competencies according to health educators in institutions of higher education in the state of Virginia. The health educators were surveyed regarding competencies perceived to be of high importance in their current position. Additionally, the study examined whether these competencies are addressed on the Certified Health Education Specialist (CHES) exam created by the National Commission for Health Education Credentialing, Inc. (NCHEC).

Data collected did support current literature in regards to importance of competencies. Regardless of job title or CHES certification status, health educators rank oral communication skills and interpersonal skills as being in the top five “soft skills” related to career success. Oral communication and interpersonal skills are among the competencies addressed by the CHES exam. Interestingly, however, 76% (n=29) of respondents reported that they were not CHES certified. This study also examined the relationship between a respondent’s job title (health-related, medically-related, or other) and his or her willingness to assist with health education curriculum development and student evaluation. Respondents whose job title directly related to health education were much more likely to be willing to help with curriculum development and student evaluation than those that had the responsibility of disseminating health education but held another type of title.

There is a need for further investigation into the basis for perceptions of dissatisfaction with college graduates by employers in regards to level of preparedness for the workforce.

DEDICATION

For my family. I know this journey has been a tremendous stress on all of us. I know at times I was preoccupied and unavailable, but that never stopped you from loving me “as big as a bear” or for all of the “biiiggg hugs” along the way, thank you.

Maddison and Reese, you are my sunshine. You will never know how much I love you and I thank God for you both everyday. I hope that one day you know that you two were the driving force behind this. I want you to know that you can do and be anything that you set your mind to. I love you so much!

Dennis, where to start? You are my rock, my support, my best friend, my Everything. You have been supportive beyond expectation. You have encouraged me to continue all 1,000 times that I justified giving up. You stood by me with not single complaint, and made sacrifices so that I could accomplish my goals. What more could a girl ask for. I love you with all that I am. Thank you

ACKNOWLEDGMENTS

I would like to thank my advisor and committee chairman Dr. Kerry J. Redican, for all of your guidance and support. You allowed me the freedom to take lead on the direction and pace of my research. You have been very instrumental in my decision to continue with my degree at Virginia Tech. You challenged me to think outside of my comfort zone. It has been a long process but in your words “the plane has landed” and I have so much to be thankful to you for.

I would also like to thank Dr. Billie Lepczyk, Dr. Richard Stratton and Dr. James Krousocas the other members of my committee. You devoted a great deal of time and provided support and knowledge that enabled me to grow as a scholar.

I would like to extend a special thanks to Hal and Sandy Switzer who allowed me to validate my research interests over ballet lessons. Thank you for the continued support that you offered so unreservedly.

Additionally I would like to thank Laura Freeman for understanding me and making time to help me through my crises of the week.

Speaking of Crises, I cannot go with out mentioning Anna Strock. I truly believe that our “Monday morning support groups” did not happen out of chance. You are a great friend!

This brings me to my family. Without your support and encouragement I am not sure where I would be. Dad thanks for being you and instilling in me the importance of education. Jane (“mom”) thank you for always making me feel strong enough to do this. I needed your talks more than you know! Jeremy thanks for always supporting me in my flavor of the week endeavor I decided to embark upon. Corrie thanks for being my “rational”--You always help talk me down when I have had enough. MeMaw, thank you for helping with the girls at a moments notice allowing me to have time to write. Mom and Dad Kunkel, thank you for allowing us to over utilize you as babysitters (you didn’t really want your days off did you?) and the use of your home as if it was our own. I am so blessed to be a part of your family. And Mom, without you as a role model I would not be the person I am today. I have learned so much from watching you. I will always remember to “reach for the stars” because you instilled in us a tremendous amount of confidence in our abilities. Thank you for believing in me, even when I did not always believe in myself. Finally, Dennis, Maddison and Reese, Thank you for your unconditional love and support I cannot even being to tell you how much you mean to me. I could not have done this with out you! I love you all.

TABLE OF CONTENTS

DEDICATION.....	iii
ACKNOWLEDGMENTS.....	iv
TABLE OF CONTENTS.....	v
LIST OF TABLES.....	vii
CHAPTER 1: INTRODUCTION.....	1
Introduction.....	1
Statement of The Problem.....	2
Health Educator Defined.....	3
Definition of Terms.....	5
Basic Assumptions.....	6
Research Objective.....	7
Research Questions.....	7
Limitations of the Study.....	7
Significance of the Study.....	8
CHAPTER 2: LITERATURE REVIEW.....	10
Introduction.....	10
The Problem.....	11
Whose Concern is it Anyway?.....	12
Employability Defined.....	14
What Employers Want.....	15
Addressing the Issue.....	22
Student's Expectations.....	24
Means of Measurement.....	29
Internship Programs.....	32
Collaboration in Course Design.....	36
Profile of a Health Educator.....	39
The Certified Health Education Specialist (CHES) Exam.....	40
Summary of the Literature Review.....	41
CHAPTER 3: METHODOLOGY.....	42
Introduction.....	42
Setting.....	42
Sample.....	43
Research Instrument.....	43
Data Collection.....	45
Data Analysis.....	46
Summary of Methodology.....	47
CHAPTER 4: RESULTS.....	49
Profile of the Respondents.....	49
Perceived Importance of Identified Competencies.....	51
Perceived Importance of Identified Competencies in Rank Order.....	56
Perception of importance of competency required in a specialized area of health promotion.....	59
The Willingness to Help.....	60
Competencies Represented on the CHES Exam.....	60

Discussion.....	68
CHAPTER 5: DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS	70
Discussion.....	70
Demographics	70
Research Question #1	71
Research Question #2	71
Additional Findings.....	72
Conclusions.....	75
Recommendations for Future Research.....	76
Summary.....	77
References	79
Appendix A: SCANS Report.....	86
Appendix B: CHES Competencies and Sub-Competencies.....	88
Appendix C: Survey Instrument	94
Appendix D: Original Survey Request Letter	97
Appendix E: Hard Copy Survey Request Letter.....	98
Appendix F: IRB Approval	99
Appendix G: Curriculum Vita	100

LIST OF TABLES

Table 1: Virginia Colleges Represented in the Targeted Sample	43
Table 2: Current Job Title.....	49
Table 3: Undergraduate Program of Study.....	50
Table 4: Graduate Program of Study.....	50
Table 5: CHES Certification Status	50
Table 6: CHES Certification Status by Graduate Program of Study	51
Table 7: Importance of Dealing with "Real World" Problems.....	51
Table 8: Importance of Technical Skills	52
Table 9: Importance of Ability to Adapt to Rapidly Changing Technologies	52
Table 10: Importance of Critical Thinking.....	53
Table 11: Importance of Written Communication Skills	53
Table 12: Importance of Oral Communication Skills.....	53
Table 13: Importance of Listening Skills	54
Table 14: Importance of Analytical Skills.....	54
Table 15: Importance of Creative Thinking Skills.....	55
Table 16: Importance of Leadership Ability	55
Table 17: Importance of Interpersonal Skills	55
Table 18: Importance of Professional Ethics.....	56
Table 19: Importance of Professionalism.....	56
Table 20: Competencies in Ranked Order of Perceived Importance.....	57
Table 21: Perceived Importance Ranking by Job Title.....	58
Table 22: Ranking by Perceived Importance by Certification Status.....	59
Table 23: Perceived Level of Importance for Specialized Competency.....	60
Table 24: Willingness to Help	60
Table 25: Experience in Dealing with "Real World" Problems as Represented on the CHES Certification Exam.....	61
Table 26: Technical Skills As Represented on the CHES Certification Exam	62
Table 27: Ability to Adapt to Rapidly Changing Technologies as Represented on the CHES Certification Exam.....	62
Table 28: Critical Thinking Skills as Represented on the CHES Certification Exam.....	63
Table 29: Written Communication Skills as Represented on the CHES Certification Exam.....	63
Table 30: Oral Communication Skills as Represented on the CHES Certification Exam.....	64
Table 31: Listening Skills as Represented on the CHES Certification Exam.....	64
Table 32: Analytical Skills as Represented on the CHES Certification Exam.....	65
Table 33: Creative Thinking Skills as Represented on the CHES Certification Exam ...	66
Table 34: Leadership Ability in the Context of Job Requirements Represented on the CHES Certification Exam.....	66
Table 35: Interpersonal Skills as Represented on the CHES Certification Exam	67
Table 36: Professional Ethics as Represented on the CHES Certification Exam.....	67
Table 37: Professionalism as Represented on the CHES Certification Exam.....	68

CHAPTER 1: INTRODUCTION

Introduction

According to the National Science Foundation (Kannankutty, 2005), as of 2003, the total number of college graduates in the United States had risen to 40,621,000, which represents an increase of forty percent between the years 1993 and 2003. College students attend institutions of higher education with expectations of becoming employed upon graduation and with the expectation that a college education will enhance the position and salary they are able to obtain upon graduation.

College is a learning ground where students gain knowledge in a particular area of study. It is a widely accepted means of gaining the knowledge needed to perform in specialized areas within the workforce. However, with the ever-changing workforce, students need to go beyond education in a particular discipline's content to also possess "soft" skills needed in problem solving, working with teams, and lifelong learning adaptability. It is no longer uncommon for individuals to not only have multiple jobs in their lifetimes, but also multiple careers as well. Therefore, students need to accrue appropriate skill sets and be capable of transferring these skills across jobs and even disciplines. However, there is an apparent disconnect between academic training and workforce needs. This disconnect has been debated for years. Concerningly, employers feel that formal education is failing to teach students the skills needed to succeed in the current job market.

According to Marin et al. (1982), it is the responsibility of higher education to place a greater emphasis on preparing students for the demands of their future. This includes meeting employers' expectations of students' skills upon graduation. In order for this skills gap to be remedied, students must possess strong basic professional skills. These include strong written and verbal communication skills, problem-solving skills, flexibility, honesty, integrity, and a strong work ethic. Employers have become disenchanted with recent graduates, as they tend to have knowledge solely of disciplinary content. Employers often complain that students have not gained enough experiences outside of the academic world to grasp the reality of the employer's needs. According to

Cote et al. (1998), “employers place a lot of importance on relevant work experience” and very few students possess such experience. Moreover, employers feel that it is the “responsibility of higher education to provide job-ready and training-ready entry-level employees” (Carnevale et al., 1990). The debate even varies within academia itself. One thought expresses that the purpose of higher education is to “foster knowledge and competencies targetedly provided in order to prepare students for future professional practice in related areas of specialization” (Teichler, 1999). Further, Heldrich (2002) cited the purpose of higher education to train individuals for specific careers rather than to train individuals to have general skills needed for the workforce. Conversely, other academics posit that higher education is responsible for disseminating productive citizens into the workforce and preparing students to possess general skills (Morley, 2001; Atkins, 1999). While the debate is fierce, perhaps it can be agreed that the ultimate goal of higher education is to prepare students for future employment.

Statement of The Problem

Peddle (2000) suggested that entry level college graduates have not acquired the skills necessary for the workforce and, as such, are not prepared for the demands of their careers. This could be due to the fact that today’s college students are expected to learn content at a faster rate than ever before. While students are expected to develop the “hard” technical skills as well as the “soft” people skills necessary to be successful in the workplace (Hofstrand, 1996; Shivpuri & Kim, 2004) a focus on content may come at the expense of time spent on soft skills. As reported by Atkins (1999), “over the last decade there has been a steady stream of reports and papers urging the higher education sector to take key, core, transferable and employability skills into the heart of students’ learning experiences.” Unfortunately, employers are becoming increasingly apprehensive in hiring new graduates, as it is becoming a professional risk to hire those with incomplete skill sets. Candy and Crebert (1996) state “the graduates are simply not prepared in the areas of problem solving, decision making, working in a team, or learning for themselves.” Further, Morely posits, “graduates are hardly thought to require emotional

intelligence, political skills, or self-care in the face of occupational stress.” He continues by saying “students need to know how rather than simply knowing that.”

Student loan debt is at an all time high as more individuals are attending institutions of higher education than ever before. However, as the increase in attendance occurs, employment satisfaction upon graduation decreases. Students are finding it harder to find jobs, particularly jobs that meet the graduates' criteria. The ultimate goal of academics is for their students to become more knowledgeable. The ultimate goal of most students who receive higher education is to become more knowledgeable in order to obtain desired employment. The ultimate desire of employers is to obtain employees who will enable their business to flourish. Therefore, it is of high importance for higher education to begin to look at the needs of their clients including students and employers. If employers' dissatisfaction with recent graduates causes employers to primarily hire experienced individuals, the desire of students to attend college will decrease. This is especially true if their postgraduate jobs will not cover their college debt, showing that a college education is not as beneficial as once deemed.

Health Educator Defined

For the purposes of this research, a health educator is defined as an individual with the responsibility of disseminating health- and wellness-related information to students at higher education institutions in the State of Virginia. This includes creating and delivering a variety of educational programs to the student body to disseminate information regarding the latest health trends and services. Additionally, the health educator is responsible for assessing the students' needs regarding health education and health services, in order to address any issues that are relevant.

1. Although health educators hold a variety of career positions, there are set expectations of anyone holding the title of health educator. The National Commission for Health Education Credentialing, Inc. (NCHEC) is a prominent organization that ensures appropriate levels of professionalism for health educators. The Certified Health Education Specialist (CHES) is a certification that clearly defines the expected competencies of individuals in

this field. The CHES certification exam is constructed from seven identified areas of responsibilities. Within each area of responsibility, competencies and sub-competencies that are necessary for health education specialists have been delineated. The questions on the certifying exam are based on these competency areas. The exam consists of 150 multiple-choice questions that measure the possession and application of knowledge that is key to professional practice as a health educator.

The competencies and sub-competencies as defined by CHES can be found in their entirety in Appendix B. NCHEC is a very respected organization that prides itself on producing individuals with the highest level of skills and knowledge. CHES (NCHEC, 2007) specifically trains health educators to:

1. *Assess individual, organizational and community health education needs.*
2. *Plan, develop, implement, manage and evaluate health education programs.*
3. *Communicate health education needs.*
4. *Build coalitions.*
5. *Identify resources and make referrals.*
6. *Act as an advocate for health issues.*
7. *Train assistants and volunteers.*
8. *Develop and use a variety of educational methods and materials.*

Individuals who become trained and CHES credentialed through the NCHEC organization will, as a result, have the ability to “assess the need for, plan, develop, implement, manage, and evaluate specific programs on quitting smoking, nutrition and exercise, substance abuse prevention, and stress management” (NCHEC, 2007).

The role of health educator can be defined in a variety of ways. The definition that will be utilized for this research is derived from the Joint Committee on Health Education and Promotion Terminology (1991). The committee defines a health educator as:

“A professionally prepared individual who serves in a variety of roles and is specifically trained to use appropriate educational strategies and methods to facilitate the development of policies, procedures, interventions, and systems conducive to the health of individuals, groups, and communities.”

Definition of Terms

The following definitions are provided to ensure clarity of commonly used terms:

1. Health Educator - *“A professionally prepared individual who serves in a variety of roles and is specifically trained to use appropriate educational strategies and methods to facilitate the development of policies, procedures, interventions, and systems conducive to the health of individuals, groups, and communities”* (Joint Committee on Health Education and Promotion Terminology, 1990).

2. Core Skills – Basic proficiencies that are needed for one to be successful in one's career field. For this research, the area of specialization specified is the campus health educator position at a higher education institution. This research will examine the importance to health educators of:

- a. Experience in dealing with real world situations.
- b. Technical skills--integrating technical skills such as the use of a computer.
- c. Ability to adapt to rapidly changing technologies.
- d. Critical thinking skills--ability to evaluate decisions and create solutions.
- e. Written communication skills.
- f. Oral communication skills.
- g. Listening skills.
- h. Analytical skills.
- i. Creative thinking skills--innovative and new idea development.
- j. Leadership ability.
- k. Interpersonal skills--the ability to work with other.
- l. Professional ethics--in accordance with formal or professional rules of right and wrong.
- m. Professionalism--the conduct, aims or qualities that characterize the profession.

3. National Commission for Health Education Credentialing, Inc. Certified Health Educator Specialist (CHES) certification--The benchmark certification held by health educators that endorses individuals as being competent to assess the need to plan, develop, implement, manage, and evaluate specific programs related to health education.
4. CHES Examination--a competency-based test that assesses aspects of the responsibilities and competencies of health educators via a paper and pencil examination.
5. CHES Certified--Individuals who have met the standards of quality by successfully passing the Certified Health Education Specialist exam conducted by The National Commission for Health Education Credentialing, Inc. resulting in the obtainment of the CHES certification credential.
6. Results were categorized into the following areas in regards to job titles:
 - a. Health related—refers to areas such as Health educator, Health Education Coordinator, Associate Director of Health Promotion, Coordinator of Wellness Education.
 - b. Medically-related—refers to areas of health such as Nursing, Director of Health Services, MD, etc.
 - c. Other—refers to areas other than the above mentioned such as Instructor, Health Promotion Faculty, Track Coach, etc.
7. Additionally, participant's background educational area of study was defined similarly
 - a. Health related—refers to study areas in health promotion, health education, health communication, health and physical education, etc.
 - b. Medically-related—refers to areas of study in nursing programs, biology, health administration, etc.
 - c. Other—refers to areas of study in other areas than mentioned above such as zoology, philosophy, business, aerospace engineering, religion, etc.

Basic Assumptions

The basic assumptions understood in this research are as follows:

1. Through efforts of the researcher to identify individuals holding the title of health educator position at each higher education institution in the state of Virginia, it is

assumed that this individual is considered to serve as the health educator on campus, and has received educational training as such.

2. Through the efforts of the researcher to create a confidential and anonymous survey method, it is assumed that the survey responses are honest and true to the views of the participants.

Research Objective

The objective of this study is to examine college health educators' perceptions of college health educators regarding the importance of core skills in their work. The educators were queried about the importance of the following core skills: dealing with real world situations; integrating technical skills, such as the use of a computer, into their work; ability to adapt to rapidly changing technologies; ability to evaluate decisions and create solutions; written and oral communication skills; listening skills; analytical skills; creative thinking skills; leadership ability; interpersonal skills; professional ethics; and professionalism.

Research Questions

To address the research objective and to examine the skill set of Virginia health educators, this study proposed two research questions:

- (1) What level of importance do campus health educators feel that core skills hold in their current job?
- (2) Are these core skills assessed by the National Commission for Health Education Credentialing, Inc. (CHES) certification?

Limitations of the Study

The following limitations restrict the generalizability of the results of this study.

1. The sample selected was limited to individuals who serve in the role of health educators in institutes of higher education in the state of Virginia.
Generalizations to health educators in other positions and geographic locations

should be made with caution.

2. Due to the specificity of the targeted population, only a small sample size (n=38) was available.
3. Due to the nature of qualitative research, insights into the competencies represented on the CHES exam reflect an interpretation of associations within the data.

Significance of the Study

Evers et al. (1998) noted that “[t]here is a need for a fundamental shift toward an emphasis of general skills in education” (Evers et al., 1998). Students and academics often undervalue the importance of transferable skills. Instead, they regard the mastery of disciplinary content to be of highest importance to employers when what is being found is quite the opposite. Employers prefer to spend their training dollars on the technical aspects of the job rather than on training in general skills. Educators urge those in higher education to teach students in areas of decision making, problem solving, how to learn, and how to think through a problem from beginning to end. In addition, employers are asking those in higher education to produce individuals who can work well with others, accept productive criticism, and get the job done without the use of unnecessary resources.

Further, those in higher education need to help students understand the career they are entering as a whole. This includes the logistics and details of the job expectations and responsibilities within a chosen career path. Students often find themselves disenchanted with their jobs as oftentimes their expectations do not match the reality of their daily experiences in a position. This conflict can create a lack of motivation as well as lowered job performance ultimately resulting in employer dissatisfaction.

Although there has been an influx of interest in the employability of higher education graduates, most researchers have focused on education as a whole rather than on specific disciplines. At this time, no known studies have been conducted concerning the discipline of health promotion specifically and the skills possessed by health educators. While the opportunities in this field are great, it is important that health

promotion students acquire employability skills in general. Therefore, a need exists for institutions of higher education to ascertain information on actions that can be taken to better prepare their graduates for the workforce. In doing this, higher education should seek the assistance of current health educators as they have the best knowledge of the skills necessary for success in the workplace.

CHAPTER 2: LITERATURE REVIEW

Introduction

The role of education has long been a source of debate. Plato believed that the ultimate knowledge (knowledge of the good) is only achieved through an arduous educational search seeking to grasp truth through reason. He viewed knowledge metaphorically as a cave, with education having the purpose of leading scholars out of the darkness of the cave and into the light of reason and enlightenment which one could continue to seek through lifelong learning. Conversely, Socratics rejected this notion and held the belief that education should emphasize “instrumental objectives from which students derived immediate practical benefit rather than struggle with potentially unanswerable metaphysical questions concerning the nature of reality” (Hyslop-Margison, 2001). Aristotle held the belief that education’s purpose is to foster individual and social wellbeing and to provide students with the “productive competencies to secure material conditions that sustain human life” (Hyslop-Margison, 2001).

According to Gardner (2000), the top five reasons why college graduates do not succeed in their first job are:

1. Lack of initiative/motivation.
2. Failure to be at work on time/attendance.
3. Failure to follow instruction.
4. Poor interpersonal skills.
5. Lack of teamwork skills.

An employer survey conducted by Clause and Quimper in 1995 revealed that there was a perceived lack in “enthusiasm, responsibility, ability to deal constructively with criticism, ability to show consideration toward fellow workers, and dependability in terms of scheduled hours.” In addition employers stated that they would like to see their graduates be harder working individuals who possess more people skills or display a more outgoing personality, pride in their work, and higher ambition. It seems as though it is not necessarily technical ability that is being sought from employers.

The Problem

In 1992, the executive officers of the State Higher Education Board concluded that “the American system of secondary and postsecondary education suffers from a disconnect between schooling and work.” As a result the committee made the following recommendations for higher education goals:

- To improve basic skills development.
- To blend theoretical concepts with practical applications.
- To increased business participation in designing curriculum directly related to workplace needs.
- To expanding cooperative and apprenticeship programs.
- To identifying skills needed in the workplace and to measure what students know and can do against those skills.

In addition, business and education groups began asserting that “American schools are not providing the necessary knowledge, skills and abilities for the new world of work” (Van Horn, 1995). Soon, other studies were launched to address this issue.

The source of this academic to career connection began in the United Kingdom, where they view the products of higher education as being the key to the future of their economy. For the UK, the year 1997 brought about a major focus change through publication of the Dearing Report. This was written by the National Committee of Inquiry into Higher Education (NCIHE) as an evaluational call to action for higher education. The committee stated that employers were unimpressed by the skill level of recent graduates, . and the committee expressed concern regarding the employability of recent graduates. In this report, the NCIHE recommended that the development of key skills should become the new aim of higher education, rather than continuing to focus on the current academic curriculum. They recommended that the development of communication skills, numeric skills, information technology skills, and skills that enable students to learn how to learn should be incorporated into every discipline. To support this endeavor, the government created funding for institutions that supported these objectives and created an environment to support these goals. This idea eventually began to be introduced to other parts of the world, including the United States.

In the U.S., the historical purpose of institutions of higher education was to prepare individuals for higher-level thinking and to serve as research institutions. The role of directly preparing students for employment was reserved for vocational education. One academic was quoted as saying, “I’ve got to say it concerns me because it’s blurring the distinction between education and training...good employers should be concerned with their own training” (Cranmer, 2006). The problem is that the workforce, as we know it today, has evolved dramatically. Graduates of higher education are in surplus resulting a greater applicant pool to chose from and allowing employers to have high expectations of those who are hired. A college degree no longer secures the job and salary of one’s choice. Recent college graduates are sometimes employed in positions that do not require a college degree, leaving students to question if higher education is the right preparation for the changing job market.

Whose Concern is it Anyway?

The phenomenon of recent college graduates being unprepared for the workforce is a concern for students, educational institutions, governments, and employers. Governments have an interest in higher education on several different levels. First, governments support educational objectives that are in the interest of current and future economic and social agendas. In addition, the government ensures the appropriateness of education to the public’s interest by means of holding institutions accountable to certain provisions by linking accountability to funding (York et al., 2006).

The UK is renowned for its efforts in connecting higher education curricula to the needs of the workforce for the betterment of the economy. In the late 1980’s under the Thatcher administration, funds were allocated to higher education through the employment department in an attempt to foster the ‘enterprise in higher education’ initiative (Yorke, 2004). In 1997, the UK launched efforts to reform higher education as a means to bettering the economy after it was found that employers were unsatisfied with the quality of graduates entering the labor market. This lack of satisfaction was leading to a decline in employment opportunities for graduates. Because the development of the labor market is essential for economic success, and contributes to the economy through

research developments, the training of specialists, and the continuing development of expertise across the spectrum of disciplines.

The issue of higher education and the link to the workforce has been under scrutiny in the U.S. during the recent past. In 1990, President George Bush created six education goals for 2000 described in the Educate America Act. The 5th (now 6th) goal states:

The portion of college graduates who demonstrate an advanced ability to think critically and communicate effectively and solve problems will increase substantially.

In addition, The School-to-Work Opportunities Act created incentives for higher education institutions to collaborate with workplaces. In 1994, the National Goals Panel reported that:

Just as we are not sure of what K-12 students are learning because of inadequate standards and measurements, we are also not sure of the standard underpinning higher education...we need a clearer understanding of the knowledge and skills these graduates attain and how they relate to the demands of a world marketplace.

Local government attempts to link higher education curricula and employers' needs have been made as well. Former Governor Jim Florio of New Jersey implemented a Business-Higher Education Forum to "develop strategies for making the higher education system more responsive to the needs of business and improving the education of the skilled workforce" (Van Horn, 1995). Currently, the forum is redirecting its focus to "creating a strong customer-supplier relationship in labor exchange between higher education and employers" (Van Horn, 1995).

As cutbacks in state education spending are becoming ever prevalent, higher education may begin to receive more scrutiny and less financial support from the state. Education is considered one of the largest areas of "discretionary" spending in a state's budget. As a result, demands to link higher education to economic development through meeting workplace needs may be demanded. This will force higher education institutions to find ways to be more responsive to the perceived needs of employers and the workforce (Van Horn, 1995).

It is a widely accepted assumption amongst policy makers that closer alliances between higher education and business will contribute to the betterment of the nation. Despite this acknowledgment, the realms of education and business sometimes do not collaborate to meet employers' needs.

Employability Defined

Employability is a difficult concept to define concisely and comprehensively. The term is “used in a variety of contexts with a range of meanings and it can lack clarity and precision as an operational concept” (Hilliage & Pollard, 1998). The following are a few definitions that have been used in the literature. Employability is:

“A set of achievements, understanding and personal attributes that make individuals more likely to gain employment and be successful in their chosen occupations” (Little, 2003).

“The ability of a graduate to gain employment appropriate to their educational standard” (Cox et al., 2006).

“Those skills required to acquire and retain a job” (Saterfiel et al., 1995).

“The preparation or foundational skills upon which a person must build job-specific skills (i.e., those that are unique to specific jobs). Among these foundational skills are those which relate to communication, personal and interpersonal relationships, problem solving, and management of organizational processes” (Saterfiel et al., 1995).

“A set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy” (Little, 2001).

More thoroughly, de Weert (1994) divides higher education skills into two groups, transferable skills and transferring skills. Transferable skills refer to those which can be deployed in a number of settings, e.g., word processing. This also includes skills which are context dependant; for example, sales that require a specific approach.

Transferring skills refers to those which are “meta-skills, the second order skills which enable someone with some knowledge, learning, understanding or skill gained in one

cognitive domain and/or social context to adapt, modify or extend it in such a way as to be able to supply it in another context” (*ibid.*). Further, Brown and colleagues (2002) take the position that employability includes the “relative chances of acquiring and maintaining different kinds of employment.” Explaining further, they articulate that whether a person finds a job is dependent of the state of the current job market and whether there are more qualified or experienced people looking for the same kinds of work. Finally, Overtoom (2000) states simply that “[e]mployability skills are transferable core skill groups that represent essential functional and enabling knowledge, skills, and attitudes required by the 21st century workplace. They are necessary for career success at all levels of employment and for all levels of education.”

What Employers Want

A survey conducted by Rainsbury and colleagues (2002) found that out of the 404 employers, 57% stated that it was difficult to find well-prepared job candidates for positions that required college degrees. According to Taylor (2005) employers want ‘basic skills’:

Above anything else employers want employees to have the right attitude—that is a willingness to work. A desire to learn, punctuality, honesty and appropriate personal behavior and personal presentation and that when in doubt about these traits they will avoid employing a person. Second to the ‘right’ attitude, employers are seeking what is regarded as ‘basic skills’, which are identified as literacy and numeracy, teamwork, communication skills, problem-solving and the ability to use equipment and technology. They also sought an understanding of ‘profit’ in terms of the need for the employee to earn more for the firm than his or her employment costs.

‘Transferable skills,’ ‘key skills,’ ‘core skills,’ ‘generic skills,’ ‘personal skills,’ ‘employability skills,’ ‘soft skills,’ ‘capabilities,’ and ‘personal competencies’ are all terms that are used interchangeably when describing the skills desired by employers. In an attempt to address the issue of employability effectively, the first step is to identify the tangible concept of what it is that is desired. The American Society for Training and Development categorized workforce basic skills into seven skill groups:

1. Influence (leadership)
2. Group Effectiveness
3. Personal Management
4. Adaptability
5. Communication
6. Competence
7. Foundation (Learning to Learn)

Harvey (2001), found that employers want graduates with knowledge, intellect, willingness to learn, self-management skills, communication skills, ability to work in teams, and interpersonal skills. Employers also value initiative, the ability to work independently, the ability to work under pressure, accuracy, attention to detail, time management skills, adaptability, the ability to appropriately assume responsibility and make decisions, and the ability to plan, organize, and coordinate (York et al., 2006).

In 1995, Van Horne conducted a survey of 404 employers to rank the importance of skills that employees bring to a job. He found that 84% of respondents rated the skills of integrity and honesty as being extremely important on a Likert scale. The skills following this in the ranking were listening, oral communication, written communication, responsibility and self-management, problem solving and knowing how to learn, which were rated as being extremely important by over 52% of those surveyed. In addition only 14% of employers felt that graduates were prepared for jobs within their companies. Interestingly, the skills that the employers rated as most desirable were the skills on which the graduates scored most poorly. Only 18% of the employers survey felt that the graduates were prepared in the area of oral communication. In addition, only 17% felt that graduates had sufficient skills in the areas of responsibility and self-management and knowing how to learn. Even more concerning, very few employers felt that graduates were adequately prepared in the areas of written communication (16%), creative thinking (12%), decision-making (11%), and problem solving (10%). These employers also commented that higher education institutions have been too slow to respond to the fast-changing job market, and that “colleges and universities aren’t flexible—they are stuck with a course catalog that never changes.”

Smith and Comyn (2004) examined the employability skills of novice workers in twelve skill areas. They identified a list of less desirable attributes of these graduates. This list included poor communication skills, lack of understanding of the big picture in regards to the business operations, difficulty in adjustment to the work environment, difficulty separating work from a social occasion, unwillingness to take the job seriously, reluctance to ask for help when needed, and lack of realization of the impression they were making on others. Employers look favorably on the traits of maturity, trainability, adaptability, cleanliness, initiative, mannerliness, high job interest, and respect for authority (Rainsbury et al., 2002).

In 2002, Wilhelm et al. discussed desirable skills in three categories: human relations skills, conceptual skills, and technical skills. They found that human relation skills as a group (positive attitude; team work; listening; honesty and integrity; initiative; handling pressure and tension; communication; concern for others; interpersonal skills; courtesy and respect for others; interest and enthusiasm; responsible behavior; self-control; respecting confidentiality; ethics; empathy for others; negotiation; values and lifestyle; persuasion; and interviewing skills) rated higher as desired skills (82.5%) than conceptual or technical skills. Interestingly, when surveyed, graduates felt that they learned the human relation skills less thoroughly than the other two skill groups. According to Murray (1994), this indicates that either educators do not understand the importance of these skills to employers, are not effectively teaching these skills, or that students do not understand the importance of these skills to employers.

The Mayer List of Key Competencies breaks down employability skills in to two categories: attributes and actual skills. The attributes category includes loyalty; positive self-esteem; commitment; a sense of humor; honesty and integrity; a balanced attitude to work and home life; enthusiasm; an ability to deal with pressure; reliability; motivation; persona; presentation; adaptability; and common sense. The skills category includes communication that contributes to productive and harmonious relations across employees and customers; teamwork that contributes to productive working relationships and outcomes; problem-solving skills that contribute to productive outcomes; self management skills that contribute to employee satisfaction and growth; planning and organizing that contribute to long-and short-term strategic planning; technology skills

that contribute to effective execution of tasks; learning skills that contribute to ongoing improvement and expansion in employee and company operations and outcomes; and initiative and enterprise skills for the future.

Employers are leaning toward soft, generic skills that can be adapted to any environment rather than specific niche specializations. Brown (2002) reported an employer's sentiment that "[a]cademic qualifications are the first tick in the box and then we move on. Today we simply take them for granted." Holmes (2001) feels differently. He states that:

Despite the rhetoric surrounding the skills agenda, it is by no means clear that employers should want skills per se; rather, they want the graduates they recruit and employ to perform in desirable ways—competently and effectively. It is the behavior, or performance that is required. Employers also talk about the sort of person they want, for example, 'proactive', 'a self-starter', 'confident', 'enthusiastic' and so on. These are sometimes rendered as 'characteristics' or 'attributes', but the use of such terms may be regarded as meaning nothing more than that the employer has expectations about how graduates go about their work, about how they perform.

Holmes goes on to argue that a person's performance is judged only by the perception of the person doing the evaluation. Whether it is perception or reality, the fact is that potential employees are being evaluated under strict criteria. When evaluating employment candidates, employers assess work experience, face-to face contact strategies, education, references, and the initial telephone contact (Curtin, 2000). Some employers search for actions or behaviors rather than words. One company in Roanoke, Virginia requires a copy of the applicant's motor vehicle record prior to hiring. When questioned about this practice, the Chief Executive Officer explained that if a candidate has applied for a replacement license, it was a sign of irresponsibility and lack of organization. Moreover, employers have demanded and achieved greater flexibility in human resources matters such as hiring and firing. Many companies now put new employees on a 90-day probationary period; during this time if either party is unhappy, they may part ways without legal recourse. This enables employers to 'plug in and play' new employees to determine their ability levels prior to investing a great deal of time and

money in them. It also requires that employees be able to demonstrate their employability skills and potential quickly prior to receiving further training (Evenson, 1999).

As noted previously, more individuals are attending college today than at any time in the past. Employers are increasingly seeking highly qualified individuals as the pool of college graduates increases. In addition, advancements in technology are requiring greater skills among employees than before. There are fewer entry-level positions available even though more high-skilled middle management positions are opening up. This leaves graduates in a tough spot, overqualified for entry-level positions yet under-experienced for a middle management position. It has become more difficult to find a first job at which one can gain experience as employers are expecting graduates to possess higher qualifications and greater skill levels than new hires had in years past. “Greener” individuals are less desired and are being passed over for jobs in favor of those who are older and more experienced. These days, employers are very success driven and do not want to decrease productivity by having to take the time and expense to train individuals on core competencies.

Employers tend to seek individuals who are flexible and can adapt to changing environments and business needs. As companies grow, so do their needs. As a result, they are in need of individuals who can transfer their knowledge and skills effortlessly. In addition, employers are not hesitant to hire and fire their employees in order to meet their needs. The days of being in the same job for life seem to be at an end. According to Cranmer (2006), the average person changes jobs nine times in his or her lifetime. It is common for individuals to not only have a number of jobs within the same discipline, but to change careers as well. It is also commonplace for these careers to be in differing fields, as well as out of the person’s initial path of study. Data from Yorke (2004) indicates that nearly half of graduates in his study did not make direct use of their degree subject. In similar findings, a survey of job advertisements showed that 40% did not require a specific area of study, just the completion of a degree (Blackburn et al., 2003). Therefore, the transferability of skills is a necessity. Cox and King (2006) put it eloquently when they said that “to be employed is to be at risk, to be employable is to be secure.” Further, in 2003, Borden and Evenback reported:

A growing body of research and documented best practices has made it clear that the learning outcomes most closely associated with long-term student achievement and success in the workplace are the general higher-order learning skills that result from a strong liberal education...Writing and communication skills, intellectual adaptiveness, creative problem solving and the ability to work with diverse individuals are amongst the liberal education outcomes that are now recognized as the traits most central to the success of the 21st century college-educated worker.

These skills are acquired through higher education and are considered higher learning or complex learning. Yorke and Knight (2006) state, “good learning is manifested in complex outcomes.” They postulate that complex learning has four defining characteristics:

1. It is highly advanced. It masters large amounts of abstract and contradictory information. It involves the replacement and disgardment of primitive understandings and theories with more sophisticated understanding and improved learning.
2. It takes a great deal of time and practice.
3. It is more than just a product of academic intelligence. Practical and tactical knowledge must also be developed.
4. It is unpredictable in developmental path or outcomes achieved.

Complex learning is neutral in respect to area of expertise but, rather, is explanatory of manifestations of generalizable knowledge. Yorke and Knight (2006) feel that it is the responsibility of higher education institutions to develop students’ capacity for complex learning that is more robust, more transferable, and more integrated with understanding and skillful practices than their previous capacity. It is an increasing concern that students are being taught to learn in a rote or receptional manner, rather than in a sophisticated manner that will enable them to cross-pollinate their knowledge across many disciplines. The National Center for Public Policy and Higher Education in the U.S. has expressed concern that complex achievements are not receiving sufficient attention in curriculum. This concern stems from the alleged weakness of critical thinking, analytical reasoning, and communication abilities of graduates.

Bell and Rodman (1995) define employability skills as the basic skills needed to gain employment as well as retain it. These skills are needed at all position levels. They further group employability skills into three categories consisting of academic skills, personal management skills, and teamwork skills.

Academic skills refer to those which are based on an educational foundation. These include communication, comprehension, critical thinking, quantitative, and technological skills. Bell and Rodman (ibid.) defined these particular skills to include the ability to: read and understand written material; understand charts and graphs; understand basic mathematics and utilize this knowledge to solve problems; use library and research skills; use specialized knowledge needed to complete a task; use tools and equipment necessary for project completion; utilize the scientific method to solve problems; and speak and write in the language in which business is being conducted.

Bell and Rodman (ibid.) defined personal management skills as “those attitudes, behaviors, and decision making processes related to responsibility and dependability, including setting goals and working to achieve them, developing and demonstrating values and ethics related to work, exercising self discipline and [having] a sense of responsibility.” The specific skills in this category are defined as attending work consistently and being on time; meeting the demands of work; developing career plans; recognizing personal strengths and weaknesses; demonstrating self-control; paying attention to details; following written instructions; working without supervision; learning new skills; and providing fresh insight into approaches to getting the job done.

Bell and Rodman (1995) defined teamwork skills as the ability to work well with others and contribute to efforts of growth and development within a group or organization. Specifically, teamwork skills include participating actively in a group setting; knowing the rules and values held by the group; listening to others in the group; demonstrating sensitivity towards ideas and views of group members; being willing to compromise when necessary for the greater good; choosing the role of leader or follower that is most conducive to goal attainment; and working effectively with a variety of people and changing settings.

Similarly, Claus and Quimper (1995) developed “graduate standards” as a means to evaluate roles, skills, and knowledge that they deem necessary for one to flourish in

careers beyond college. They broke down these standards into ten categories: academic achievers, self-directed learners, complex thinkers, effective communicators, individual/group problem solvers, strong interpersonal relaters, collaborative workers, creative quality producers, community contributors, and health-conscious individuals. Beyond this, they further defined each category by creating specific criteria for meeting each standard.

Employers recognize a model employee as being one who takes initiative; accepts responsibility above and beyond one's stated job; volunteers for additional activities; promotes new ideas; presents ideas in a clear written and verbal manner; and also sees one's job in its larger context and is open to other viewpoints, such as those of customers, managers, and peers (Gardner, 2000). In the current times, graduates not only need to be able to do a set job, but also have the capability to deal intelligently with challenges and changes they will encounter so that they are able to manage their relationship with work and learning throughout all stages of their life (Little, 2001). As Harvey (2001) explains, employers want graduates to adapt quickly to the new world of work, use their skills and abilities to develop organizations, and use higher level skills to facilitate innovation and teamwork.

Many authors have pointed out that the key to job acquisition and retention is to continually develop skills beyond those simply required for a specific job. They describe employability skills as those that enable individuals to prove themselves worthy of and valuable to an organization. High personal qualities seem to be a major theme of employers' needs. Brown et al. (2002) state that "[j]udgments about one's drive and commitment, communication skills, team-working and self-management skills have become more important alongside considerations of paper qualifications." Yorke (2004) quoted one employer as saying "workers need not only to have learned a lot but also, above all, have learned how to learn." The employer continued by saying "[t]hey must have the capacity to not only adapt but also to be creative in rapidly changing work environments."

Addressing the Issue

The USEM was created by Pool and Sewell (2007) as a practical explanation of employability. The model refers to the employability of a student based on

understanding, skillful practices, efficacy beliefs, and metacognition. USEM illustrates a high correlation between knowledge that comes from a curriculum that incorporates these proficiencies and employability.

Cox and King (2006) define employability as the state of possessing the capability to acquire the skills to do the required work, not necessarily being able to do the work immediately without further training. It is the word ‘capability’ that was the initial prompt in the development of the USEM model. According to Yorke and Knight (2006), there is a parallel between capable individuals and those desired for employment. Similar characteristics include the ability to take effective and appropriate action, to clearly communicate their objectives, to work effectively with others, and to pursue continuous enrichment and learning. Further, capability does not lie in an individual’s expertise, but rather in the ability to adapt their knowledge and skills to the given situation.

A report by the Labor Market Information Center in 1995 stated that “companies that succeed generally have one thing in common...they hire workers whose skills allow them to learn and adapt to technology and changing business practices quickly and efficiently” (Chaffee, 2000). The Alberta (Canada) Education report states:

As we move into the ‘information age’, the ‘knowledge worker’ will be in high demand. All workers, regardless of their career, will require high-level employability skills.

Gedye and colleagues (2004) further comment by saying:

The workplace is also becoming increasingly subject to change. For employees, this means an increased likelihood of having to make several career turns and adjustments. Within any given profession, it is also expected that the nature of the job too will undergo significant change. In order to compete for employment in this changing labor market, graduates will need to be equipped with knowledge, intellect, skills, flexibility, and adaptability. Lifelong learning skills will become increasingly important for a career since the graduate of the twenty-first century can no longer expect a job, or indeed, a career for life.

They go on to recommend that:

Employers and educators should work together to identify the general employability, entrepreneurship and career-awareness skills and standards that students should develop in school programs.

Conversely, Brennen (2000) suggests that the term employability is too broad and should be further defined in terms of two categories: 1) obtaining a job, which includes the amount of time it takes to get a job, the range of job types entered, job level or seniority, work demands, and earnings, and 2) suitability of preparation for a job, which includes the match between degree earned and field of job, graduates' perceptions of knowledge or skill deficiencies, and graduates' perceptions of course relevance.

Student's Expectations

Students choose to attend higher education institutions for a variety of reasons. As Cox and King (2006) point out, students do not chose higher education simply for greater subject knowledge. Students seek out higher education in aspiration of greater employment opportunities as well as financial gain. An individual's decision to continue in school rather than to enter the workforce results in relinquishing of income that would otherwise be earned throughout their period of schooling in addition to incurring costs associated with education.

Students often will leave college with unrealistic expectations about employment. They often feel that their college education is enough to get them the job they desire regardless of their experience; further, they feel their experiences in college through participation in clubs and organizations constitute work experience. During their college years, students tend to become overly confident in their hireability assets. Oftentimes they enter the workforce with inflated expectations and demands regarding salary, position, title, work hours, and the reality of job description and duties. Further, graduates' views, as compared to employers' views, of entitlement are often misaligned. Although in part, this mismatch is a related to students' level of maturity, educators must take some responsibility for students' unrealistic expectations as well. These students are being taught in class about the average statistics regarding the job market without this information being broken down according to employees' experience, age, years on the job, demographics, or hierarchy of job placement. Graduates are turning down positions

that would be good opportunities because jobs do not offer the salary that they were expecting.

Informal interviews with several senior students at Virginia Tech revealed a general consensus that employers should vie for them rather than the other way around. One senior in the midst of interviewing for his first job made the comment “If an employer will not pay for me to travel to their location for the interview, then I will not interview.” When asked what type of salary they desired, another student commented, “I would like to make around 65K, but I can not take less than 42K.” When prodded as to the source of their expectations, they traced it back to classroom learnings. The problem with this is that these students are being taught about data on an economic whole rather than broken down into levels of the workforce lifecycle from entry to retirement. It is uncertain if academics understand the implications of their teachings to students. One academic was quoted as saying, “with a completion on a degree from this university, combined with a good reference, ensures good prospects” (Cranmer, 2006). Students at this junction in life are particularly influenceable. The question is: are our classrooms adequately arming them with the appropriate information needed to succeed in the work environment? In a study conducted by Yorke in 2004, graduates reported that their teachers had placed a great deal of emphasis on traditional academic values such as subject knowledge, high academic standards and the ability to work independently. Unfortunately, the simple assumption that a college degree will lead to a promising, high-paying job is poorly founded.

Geyde et al. (2004) points out that

undergraduates predominantly believe that, in terms of qualifications, their degree will be enough. Getting students to think realistically about the need for further experience after graduation may need to be addressed as part of the careers advice given to undergraduates.

Interestingly, once graduated and in the work force for a period of time, students quickly change their ideas of reality. A survey of graduates revealed that they felt that shortcomings in their education included insufficient opportunities to develop employability skills. In addition students from various majors felt as though they had not

benefited greatly from their college education in the areas of personal and social skills regarding spoken communication or responsibility and leadership (de Weert, 1994).

Once in the actual work force, some graduates feel as though they have relatively little experience in the work environment in which they become employed. They tend to feel that their programs of study are unbalanced. Yorke (2004) cited one graduate as saying her program failed to prepare her for the complexity of the tasks she confronted once she arrived in industry. Fallows and Weller (2000) found that although students have acquired a level of what they consider 'expertise' in their studies, it is insufficient to overcome the lack of practical on-the-job experience. Fallows and Weller (*ibid.*) also found that it takes graduates approximately three years to establish themselves in employment positions that could be deemed graduate level.

The statement "it's not what you know, it's who you know" suggests another area for improvement. This is supported by findings in which students reported a lack of institutional support in regards to building networks of contacts (Yorke, 2004).

It is important for educators to keep in mind that students' anticipation of outcomes of learning seems to be a great determinant in their acquisition of knowledge. In other words, if students perceive the information as being useful in the future, they are more likely to be more active in the learning process, resulting in long-term retention.

Higher education institutions do make efforts to prepare graduates for resume writing and interviewing skills. A program created at Dalhousie University in Canada teaches students how to present their qualifications, skills, experience, and achievements to employers. Some employers consider these courses to be 'resume doctoring' teachings and argue that college experiences such as clubs and the like, do not serve as work or career experience.

A study conducted by Gedye et al. (2004) surveyed graduates on their college and post-college experiences and found that 84% of students attended college to improve their career prospects, while only 10% desired to develop their transferability skills. One of the key findings uncovered in this study was that undergraduate opinions on the career value of their degree were quite optimistic; however, the students seemed to become disenchanted once they gained the actual experience of job searching. When surveyed, 97% of students agreed or strongly agreed that their degree would substantially improve

their job prospects compared to only 60% who felt the same way once graduated. Further, during college, 97% of students agreed or strongly agreed that their degree made them qualified for a range of career paths in comparison with the 77% of graduates that agreed. Only 35% of the graduates surveyed concurred that their degree assisted them in getting them the job they wanted. In contrast, the majority of the graduates stated that their degree helped them gain employment beyond what would have been available to them had they not gotten their college degree; however, to their dismay, the jobs they secured were not what they would classify as the 'job they wanted' or a 'good job'. It is unclear if this deflation of optimism is a product of unrealistic ambition that often accompanies new graduates or a strongly competitive labor market. Analogously, only 27% of students, compared with 62% of graduates, agreed or strongly agreed that career guidance should accompany their curriculum and 29% of students, compared to 71% of graduates, felt that there was a need for more vocational training from their degree program. However, 92% of both groups agreed or strongly agreed that curriculum should include more skills useful to employment. Even more interestingly, three skills were seen by graduates as been given too little attention in their degrees: job search skills, verbal presentation, and leadership. These were the same three skills that students expected to develop in their degree.

Finally, Yorke (2004) explains

There is no guarantee that the desired student development will be achieved. Indeed, the best intentions of curriculum designers and teachers may not be fully recognized by students during their programmes, and an appraisal may have to await actual employment, when the graduates can more easily discern where their programmes have helped them to make the transition to the work environment—and, perhaps, where they have not.

Higher education leaders have the valid concern that employers do an inadequate job of communicating their needs for recent college graduates' skills to those in higher education. Employers sometimes feel that their hiring needs are specific to their company rather than representative of employers' needs. They also are quick to point out that high school graduates entering college sometimes are ill prepared, leaving colleges with the responsibility of bringing students up to college level performance and then

taking them further to an employable skill level. Academic leaders assert that it is the students' responsibility to push their faculty members to focus on needed and practical areas relevant to employment. Regardless of where the greatest share of the responsibility lies, the fact of the matter is that many of the skills and abilities desired by employers are not taught in a classroom setting. So the questions of what should be taught in schools, what should be taught on the job.

Some argue that by focusing so heavily on employability and the job placements of graduates as a means of measuring the quality of higher education, one is doing a major injustice to the gains students make by attending higher education institutions. Likewise, Morley (2001) insists that

performance indicators reduce a complexity of subjective judgments to a single objective measure. They reflect panics, prejudices and fears at any one particular political and historic moment but they carry no reliable analysis of causes of the anxieties.

He further defends higher education by questioning whether the current purpose of universities is to meet the needs of modern capitalism, resulting in students that are being 'constructed solely as future workers, rather than fully rounded citizens.' In agreement, Leonard (2000) states:

Education has been redefined as primarily a means of skilling more and more young workers, and of providing professional and in-service courses in life-long (re)learning; rather than about expanding the minds and developing the capacities of citizens.

Unfortunately, there is a disconnect between employers and higher education as to what is not only teachable, but appropriate to teach as well. The problem lies in the idea that "[I]f organizations depend on the knowledge and skills of the workforce then the power rests with those that have the knowledge, skills and insights that companies want" (Brown et al., 2002). This is especially concerning since graduates student loan debts are at an all time high, and it is therefore conceivable that students will need to seek higher paying positions in order to repay their debts. In addition to this, the competition that is growing for well paying graduate level jobs may lead students to choose an institution based on its record of graduate employment (Gedye et al., 2004). All of these trends

could lead to a decrease in higher education as young Americans begin to switch their focus to gaining experience rather than education.

As the demands on today's workforce are increasing, new graduates have to be better than ever before. As the idea of graduate employability flourishes, new directions in assisting students are being pursued such as personal development planning, opportunities for work experience, and improved career guidance and planning (Harvey, 2001). If countries are to compete in the global, knowledge-driven economy, the development of a highly educated workforce is essential for future prosperity (Harvey, 2001).

Means of Measurement

In recent years, there has been an attempt to articulate educational goals that translate into employability skills. Among the groups addressing these educational goals are the Secretary's Commission on Achieving Necessary Skills (1991), the National Council on Education Standards and Testing (NCEST) (1992), the National Educational Goals Panel (1992), the Future of American Workforce Conference (1994), the National Education Standards and Improvement Council (1994), the National Skills Standards Board (1994), the New Standards Applied Learning Framework Project (1994), and Vice President Gore's Twenty-First Century Skills for Twenty-First Century Jobs (1999) among many others.

Measuring employability is far more difficult than defining it. There have been many attempts to create an effective tool to measure and assess employability skills. The American College of Testing's Center for Education and Work has developed a large scale assessment that examines the areas of reading for information, applied mathematics, listening, writing, locating information, applied technology, and teamwork skills (Saterfiel et al., 1995). In addition, the state of Ohio developed the Ohio Competency Assessment Program (OCAP) in order to assess job-specific skills. Utilizing this assessment, they continued to develop a more comprehensive assessment to measure one's foundational skills along with his or her specialized skills (Saterfiel, et al., 1995). OCAP clusters skills into twelve units: career development, decision making and problem-solving, work ethic, job-seeking skills, job retention and career advancement skills, technology in the workplace, lifelong learning, economic education, balancing

work and family, citizenship in the workplace, leadership, and entrepreneurship. OCAP further distinguishes skills as those needed for entry-level employment and those needed for advancement to higher positions.

In 1991, the Secretary's Commission on Achieving Necessary Skills (SCANS) of the U.S. Department of Labor issued a report defining what American students need for success in the workforce. These skills were intended primarily for students making the transition from school through grade 12 to the workforce; however, the skills can transfer as basic skills for those who go on to higher education as well. The five competencies of SCANS can be found in Appendix A.

The Employability Skills Profile (www.conferenceboard.ca/education) is another tool that is utilized widely by educators, employers and career counselors. It was created by the Conference Board of Canada's Corporate Council on Education with the purpose of identifying and communicating the skills required for employment by 25 of the largest employers of the Canadian workforce. Further, the state of Michigan utilized the input of businesses to create their portfolio evaluation (Saterfiel, 1995). Although this measurement is not being utilized as designed, it took a step toward improving employability by going to the source.

If the decision is made to utilize a tool for measuring skills acquisition, there are a few important guidelines according to Saterfiel and McLarty (1995). First, an accurate job analysis must be conducted, including specific skills required to be successful. This ensures that the skills being measured are actually those desired by employers as well as determining the level at which the employee possesses these skills. Second, the skills being assessed should be teachable skills. And lastly, it is crucial that each individual assessment is evaluated in the context of its purpose.

One major question that can be posed with regard to measuring success is whether the skill being measured is an institutional achievement or an individual achievement (Harvey, 2001). A second problem with evaluation noted by Harvey (2001) lies in the notion that successful employability outcomes are determined by the proportion of graduates that acquire a full time job within a determined amount of time following graduation. This can confuse the issues of job acquisition and preparedness for employment.

On a separate note, Brown et al. (2002) found that employers' evaluation of graduates was influenced by the reputation possessed by the institution or program from which the individual graduated. Further, he found a correlation between satisfaction with a graduate's performance and the admissions requirements of the graduate's institution and with the reputation of the institution the graduate attended.

A major adjustment in the learning process could occur by means of developing practical intelligence alongside of academic intelligence. It is important for students to adopt learning-oriented goals rather than performance goals, meaning those that make us 'look good' or 'not look bad' (York et al., 2006). The important thing to remember is that assessments must emphasize the skills, knowledge and attitudes perceived to be most important (Wilhelm et al., 2002). Assessment is typically utilized for purposes of grading rather than for determining if real learning has taken place. The assessment only becomes meaningful in learning terms when the learner recognizes the gap in their current knowledge, understanding, or skill. Once the learner recognizes this gap and takes action to adjust it, learning has taken place.

Wilhelm et al. (2002), defined certain criteria that should accompany a quality assessment as follows:

- Assessments should be tied closely to the curriculum. They should have content validity and be used to reflect, enhance, and extend instructional experiences.
- Assessments should provide measures of progress toward meeting clearly defined standards and should produce reliable information about learning over time.
- Results of assessments should be easily conveyed to the various audiences that use them. Assessment results should be easily produced and understood.
- Assessments should not cost more than they are worth. Assessments cost more than just the direct expenditure of dollars for testing. Time of the learners and instructors should be used well. If an assessment does not inform instruction, it is probably not worth using.

A variety of assessment formats continue to emerge with the goal of assessing academic learnings compared with those needed in the workforce. While measurement assists in tracking progress toward an expected standard of performance and suggests areas for performance improvement, the decision must be made as to the viability of the measure.

With all of the emphasis placed on measurement opportunities, employers have stated that they have very little interest in standardized testing as a means of determining employability or acquisition of skills. Academics have stated that it is difficult to accurately measure ones employability skill level. So the question remains, should efforts and resources be utilized to create a measurement system, or should these resources be used in building the skills themselves.

Internship Programs

“Learning by doing” or learning through experience is often acclaimed as a superior method of learning. This approach, coupled with support, guidance and a reflection on the experience all assist in the process of long-term learning as opposed to the short-term learning one might gain for the purpose of course requirements or a test. With that being said, it is not necessarily the experience that ensures that learning that is established, but the process that is most important in permanent learning acquisition.

Work-based programs offered within higher education institutions include internships, cooperative education programs, and apprenticeship programs. These programs are designed to give the students “real world” work experience to enhance their learning and build their employability skills. In addition to this, these programs attempt to offer students a realistic snapshot of what it would be like to work in a particular environment to ensure that it fits in with their perceptions and aligns with their life plan (Callanan et al., 2004). It is often difficult for students to make informed career decisions due to a lack of understanding of the complexity of the job market.

For over twenty years, students have been participating in these types of programs during their educational career. Today, three out of four higher education students will complete some sort of work-based program to enhance their classroom learning (Callanan et al., 2004). Employers value these programs as a means of recruiting. It is to their

benefit to “try out” students prior to employing them. In addition to this, employers rely on students to return to their institutions and spread the word about their company. These companies hope to draw a greater base of potential hires through the excitement about their company shown by their interns (Callanan et al., 2004).

Institutions work hard to create and maintain internship programs, but are they effective? Oftentimes, the quality of the experience gained in the program is out of the control of the institution. In addition, like many other courses, students tend to choose the easiest path to completion. For example, institutions often offer course credit for employment. If a student already has a job, should that job count, and if so what are the criteria for assessment? If institutions are not involved in communication with the employer in regards to expectations, who is to say the experience was up to par with academic expectations? The Graduate Apprenticeship Program concludes that work experience must be closely related to subsequent employment in order for it to be productive (Cranmer, 2006). Moreover, the tasks performed by students during the internships must replicate tasks they will encounter upon entering their careers. Oftentimes businesses see internships as free labor and involve students in menial tasks such as filing, thereby offering no educational opportunities from which the student can gain. On the other hand, employers who agree to internship programs sometimes do not have the time or means to lay the necessary groundwork to train interns to do anything other than very simple tasks. This relates back to the issue of students’ lack of solid skills necessary to ably participate in the workforce.

Churchill (1995) conducted a project, the methods of which are relevant to this study, involving high school students gaining experience in the working world. The factor that made this study so unique is that, rather having them gain conventional work experience, the students were placed in the position of being decision makers within the company. This allowed the students to not only experience the day-to-day operations of a company, but also to give them a learning experience that aided their understanding of why the day-to-day operations occurred

To help students master the transferable or soft skills that they do learn in the classroom, the skills must be supported by practice and feedback in order to be converted to real working skills or solid learned behaviors. Van Horn (1995) reported that 87% of

the 404 employers he interviewed stated that incorporating more experienced-based learning, as in internships and cooperative education would improve recruiting from colleges and universities as this “provides the best indicator of a graduate’s ability to make the transition from college to work.”

Work-based learnings are yet to be widely implemented in higher education. Perhaps an accreditation method would lend credibility to these programs. Smith and Betts (2000) feel that this type of validation is crucial for the success of work-experience learning in higher education.

If outcomes, assessment, standards and quality processes are secure, there is every reason to recognize the students’ achievements explicitly through the granting of an award or credit as part of an award. This provides motivation for the student, status for the work-based programme, staff development for the employer, and for the university as a powerful external symbol of involvement in the business community and the creation of income.

Higher education can work cooperatively with business partners to create and define standards that are acceptable to academia and reflect occupational and professional standards. This can be done without the integrity of academia being compromised if the two work as partners with the same goal in mind.

Perhaps the most effective transition from higher education to the workforce occurs in the medical fields. In most medical fields, the final stages of higher education is a phase of residency in which the students get a chance to put their schooling to practical use in actual work environments under the supervision of an attending physician or other appropriate supervisor. For example, at the University of Maryland, nursing students spend their final year developing their knowledge into experience through a 3 credit clinical practicum (Rabinowitz, 1995). During this time, the students spend 144 hours minimum following a preceptor’s work to add practical value to their knowledge and experience of higher education.

A similar program, the Luton Graduate Apprenticeship Scheme, is in existence in the UK. This is based on the well-known apprenticeship idea from long ago where the apprentice arrived with little or no prior experience to work alongside a more experienced practitioner for a predetermined period of time. The Luton program pairs apprentices

with real companies with the goal of the student gaining needed work experience while allowing the employer to seek out possible recruits and examine their work performance to determine if they are desirable as a new hire. A positive asset to this program is that prior to the work experience an array of pertinent workshops are conducted such as interview techniques, understanding organizations, career guidance and management, job seeking skills, improving one's own learning and performance, working with others, problem solving, communication, and application of numbers. This is a unique and desired addition to a traditional on-the-job training type of program. By requiring participation in these workshops, there is a sense of completion, meaning that the students are able to take all that they have learned and see the big picture in the application of their knowledge. Once this occurs and the information is delivered in a way that is deemed applicable to the student, a deeper learning will take place. At this point, the real learning occurs and the effect of all of the years spent in school becomes tangible rather than simply being surface learnings that enabled students to merely pass a test or a course. Those involved with the Luton program have been pleased according to Fallows and Weller 2000a. et al. with one employer stating:

The Graduate Apprenticeship Scheme has helped our organization to find the right talent locally; the Scheme has given us the confidence to take on a new graduate.

Another standard internship program is found in education studies through student teaching requirements. The students are able to practice being a teacher before they actually are one. This program places students in classrooms requiring them to carry out various tasks that will be required of them once they have their own class. This is also a great source for job placement once they graduate. This program works for education fields, as there is a fairly straight path in education degrees from college to work. Most education majors want to be teachers whereas the career paths of other majors are far less defined.

As we transition from the industrial age to the information age, employers will be more likely to draw employees from a diverse labor market where those with the widest range of professional and employable skills will be chosen for employment.

Collaboration in Course Design

“Nothing but good can come from a more intimate co-operation between professional bodies and institutions of higher education.”

-Roberts, 1997

When examining curriculum, it is important to discern if there is sufficient opportunity for the development of a range of skills, understandings and personal attitudes that are likely to be desired in employment (Yorke, 2004). As employers are the primary determiners of the skills that will actually enable an individual to acquire and retain a job, it is crucial that their desires be examined.

In 2000, The Higher Education Funding Council for England (HEFCE) examined the condition of the graduate labor market. They found that graduates who participated in a structured work experience that included employer contribution to their curriculum, as opposed to straight classroom learnings related to development of these skills, had a greater chance of finding a desirable job within six months of graduation (Yorke, 2004). There is a suggestion that the goals of academia and employers are not aligned. Greater collaboration among employers and academic institutions should be pursued to align their goals (Cox et al., 2006).

Despite the expression of concerns surrounding this issue, Brown et al. (2002) point out that

Graduates may be making themselves more employable by having a university education but this may not lead to the kinds of jobs and careers associated with a university education in the past. The idea that ‘the more you learn the more you earn’ has a degree of validity as long as other people are not learning the same things, otherwise one is running to stand still.

Further, Chaffee (1990) asserts that higher education institutions must view employers as customers in order to maintain enrollment and the perception that higher education is more valuable than vocational training alone. “Like it or not, and whatever else may be in the mission statement, preparing future employees is absolutely fundamental to the purpose of all postsecondary education. The enterprise needs to begin to take employers seriously as important customers” (Chaffee, 1990). Similarly, a survey conducted in

New Jersey revealed that employers spend the most on training skills in the areas of problem-solving, decision-making, responsibility and self management, oral and written communication, creative thinking, and listening. Moreover, Van Horn (1995) revealed that employers suggested that improvements to higher education could be made by means of providing college students with more experience-based learning as well as by more solicitation of input from businesses into curriculum content.

Recently, in 2004, an Australian company contributed to course design by developing an apprenticeship program that taught students how their academic background would help them in the work force. This converted learning into long-term benefits by assisting students to apply their academic foundations in real world situations. The drawback to this method is that the students learn from a specific employer, which may lead to the question, “Is the information learned specific to this company or transferable to other positions or companies?” An additional risk is that the institution may be seen as vocational or technical rather than academic in nature.

Another suggestion for creating alignment is through collaboration in course delivery. In this situation, employers could present guest lectures, role-play with students, or work in placement situations with students. Each effort would have a “real world” component such as problem solving. This structure gives the students a chance to work through what is learned in the classroom to see how it would play out in real world situations. This approach would assist students in realizing that things are at times more multifarious than they appear in a book or theory.

Collaboration in course assessment is also an interesting way to incorporate employers into academia. In 2000, Freeman created a problem-solving assignment for students to complete. Once complete, the students then had to present their work directly to a businessperson who would then provide the students with feedback and recommendations that would help the students in the future. This is especially intriguing as it takes academic learning and places it in real world settings.

Van Horn (1995) reported employers feel that:

...Institutionally, most educational providers are relatively distant from employers; they have little knowledge of specific employers, job opportunities, hiring requirements, promotion opportunities in various occupations and with

specific employers, and other aspects of local employment that are crucial to their students and to the content of their programs...the incentives for educational institutions to be responsive to employers are lacking since they are enrollment-driven and not outcome-oriented.

Smith and Betts (2000) characterize work-related learning into three categories: learning about work, which is informational; learning at work, which is locational; and learning through work, which is experiential. They suggest that a marriage of the categories should take place for effective education. They postulate that collaboration alone does not ensure effective learning but is achieved through the quality and effectiveness of the partnership. They recognize that in order for quality learning partnerships to exist, the following must be included in educational criteria:

1. Explicit learning outcomes.
2. Formal assessment process.
3. Identification and delivery of standards.
4. The application of appropriate higher education quality assurance and enhancement processes.
5. Recognition through the awarding of credit or other certification.

Principles of successful partnerships between higher education and employers are beginning to emerge both in the literature and in practice. Yet, employers still feel as though higher education lacks the desire to meet the changing needs of the workforce as illustrated in the following comments documented by Holmes and Miller (2000):

The universities do not do enough. Academics fashion courses based on their own perceptions of business needs. This results in a self-perpetuating failure to provide what industry needs.

Too many academics see industry as a necessary evil which will lead eventually to absorb their graduate output. They have to realize they are growing potential captains of industry.

We're all guilty of putting the emphasis solely on getting good exam results, when we should be developing the person. I would say it is two thirds the person, one third the degree which matters.

Profile of a Health Educator

Cottrell et al. (2006) state that “[h]ealth educators have long realized that learning is more than simply the acquisition of knowledge. Learning also involves instructional elements such as critical thinking, skill development, and real-life application” (Cottrell et al. 2006). The field of health education is as diverse as the skills needed in its practice. Stated eloquently by Gali (1976, cited in Cottrell et al. 2006), health education is an applied science that derives its body of knowledge from a variety of disciplines.

The objective of the profession is to improve the quality of life in regard to health-related issues. According to NCHEC, “the goal of health education is to promote, maintain, and improve individual and community health. The teaching-learning process is the hallmark and social agenda that differentiates the practice of health education from that of other helping professions in achieving this goal” (NCHEC, 1996).

The areas of responsibility for a health educator have been defined by NCHEC as follows:

- Assess Individual and community needs for health education.
- Plan effective health education strategies, interventions, and programs.
- Implement health education strategies, interventions, and programs.
- Conduct evaluation and research related to health education.
- Administer health education strategies, interventions, and programs.
- Serve as health education resource person.
- Communicate and advocate for health and health education.

Careerplanner.com (2007), a career planning website, provides a standard health educator job description as follows:

Promote, maintain, and improve individual and community health by assisting individuals and communities to adopt healthy behaviors. Collect and analyze data to identify community needs prior to planning, implementing, monitoring, and evaluating programs designed to encourage healthy lifestyles, policies and environments. May also serve as a resource to assist individuals, other professionals, or the community, and may administer fiscal resources for health education programs.

Health educators often hold positions in university and college settings. Within the college setting, health educators usually have faculty positions or a health educator position within the health services or wellness departments. The latter focuses on planning, implementation, and evaluation of campus health and wellness programs. Typically, the minimum qualifications for a position of this nature include a bachelor's or Master's degree in health education (Cottrell, et al., 2006).

Like many careers, there is not a defined career path for health educators. These positions, while diverse, require the same major skills and competencies. These competencies are addressed in the certified health education specialist exam (CHES).

The Certified Health Education Specialist (CHES) Exam

The field of health promotion utilizes certification as a means of professional credentialing in order to uphold uniform quality throughout the profession. The National Commission for Health Education Credentialing (NCHEC) offers the certified health education specialist exam (CHES) to fulfill this expectation. The competency-based exam assesses possession, application, and interpretation of knowledge and abilities in twenty-seven competencies related to assessing individual and community needs for health education, planning effective health education programs, implementing health education programs, coordinating provision of health education and communicating health and health education needs (NCHEC.org).

The exam is made up of 150 multiple-choice questions and is administered in a traditional paper format. Individuals are granted eligibility to take the CHES exam based on academic accomplishments. Individuals must have completed a degree in a higher education program in the discipline of health education to take the exam.

The exam is governed by the Division Board for Certification of Health Education Specialists (DBCHEs). This division of NCHEC is a volunteer board of seven directors who are CHES certified and elected into this role. The board is directly responsible for determining if individuals have shown competence in areas that are considered essential for health educators in the profession. Additionally, the DBCHEs, along with the Professional Examination Service (PES), are responsible for content validity of exam items, standard-setting activities, and continued recommendations for improvement to

certification programs (Dennis, 2002). By creating a professional certification program, national standards are established in regards to knowledge and skill levels of individuals holding this certification.

Summary of the Literature Review

Although the study of the relationship between higher education and employability began in the UK, concerns about institutions of higher education not producing graduates who possess hireability skills is a worldwide issue that needs to be addressed. One area of difficulty is that what employers want in their employees is not globally consistent. As business becomes increasingly international in character, this becomes of increasing concern. For example, German employers place great emphasis on specific qualifications, whereas others, such as British employers, desire a generally trained mind, and place great weight on attitudes and social skills. Employers in different areas even differ in their opinions on the length and vigor of programs (de Weert, 1994).

It is certain however, that employers seem to be especially cautious in recruiting new graduates. They want employees who are adequately prepared for the job market by possessing solid oral and written communication skills, commercial awareness and financial knowledge, as well as a variety of strong interpersonal skills that could fall under the categories of solid work ethic and life long learning. Further, they are in search of those who can make an immediate contribution without a lengthy training period. Simple steps in integrating work-related experience into classroom learnings could exist without much reformation of the current structure.

Despite a wealth of literature on the topic of employability, few studies deal with specific disciplines or fields of study. A search of the published literature through the use of Eric from EBSCOhost revealed no studies on public health graduates and their success in employability.

It is important to note that the benefits of higher education are tremendous and reach far beyond the scope of this investigation. The issues in this paper are being addressed as a crucial area for improvement and should not be considered a failure of the academic system.

CHAPTER 3: METHODOLOGY

Introduction

This chapter discusses the methods and procedures that were utilized to answer the research questions of this study. The objective of this study was to examine the perceptions of college health educators regarding the importance of core skills such as dealing with real world situations; integrating technical skills such as the use of a computer into their work; ability to adapt to rapidly changing technologies; ability to evaluate decisions and create solutions; written and oral communication skills; listening skills; analytical skills; creative thinking skills; leadership ability; interpersonal skills; professional ethics; and professionalism.

Information regarding the setting, sample, instrument selection and utilization, data collection procedures, and analysis of results will be discussed in detail in this chapter.

Setting

The study was conducted within institutions of higher education throughout the State of Virginia. The institutions included consisted of all accredited four-year public and private institutions offering, at a minimum, bachelor's degree programs, with some offering master's and doctoral degree programs as well. Community colleges, two year institutions and vocational and technical schools were not included in the sample due to the lack of a campus health educator position at these types of institutions. The campuses included have an on-site health center and/or a wellness center and have identified individuals who serve as their campus health educator. The departmental location of the health educator varies among the institutions; however, this position is typically housed in the campus health center or the campus wellness center. The purpose of health education in each of these centers, regardless of departmental affiliation, is to promote healthful living and to make students aware of issues associated with unhealthy behaviors.

Sample

The purpose of the study was to assess and understand the competencies and skills needed by health educators to successfully perform their work at institutions of higher education. The sample for this study includes thirty-nine institutions of higher education throughout the state of Virginia. The researcher identified the individual holding the title of campus health educator at each institution. These individuals were located by searching each institution’s website. In situations in which an individual could not be identified from information on the school’s website, the researcher established phone contact with the institution to obtain the contact information of the relevant individual to be included. Some institutions had more than one health educator position, resulting in a total targeted sample size of forty-six individuals to be surveyed. Table 1 lists each institution of higher education that was represented in the sample.

Table 1: Virginia Colleges Represented in the Targeted Sample

Bluefield College	James Madison University	St. Paul's College
Bridgewater College	Liberty University	Sweetbriar College
Christendom College	Longwood College	University of Mary Washington
Christopher Newport University	Lynchburg College	University of Richmond
College of William & Mary	Mary Baldwin College	University of Virginia
Christendom College	Marymount University	Virginia Commonwealth University
Eastern Mennonite College	Norfolk State University	Virginia Intermont College
Emory & Henry College	Old Dominion University	Virginia Military Institute
Ferrum College	Radford University	Virginia State University
George Mason	Randolph-Macon Women's College	Virginia Tech University
Hampden-Sydney College	Richard Bland College	Virginia Union University
Hampton University	Roanoke College	Virginia Wesleyan College
Hollins University	Shenandoah University	Washington & Lee University

Research Instrument

Upon completion of a review of literature review regarding relevant skills and competencies needed to be successful in a health educator position, a previously developed research instrument was identified and adapted to be more content specific. The original survey instrument was created and administered by Dr. Sharon Paranto as part of her dissertation work at Northern State University. The survey has since been utilized in various extension research projects including the work of Dr. Mayuresh Keller of Salem State College. The original instrument was created based on a literature review related to competencies and skills sought by employees when hiring college graduates, as

well as literature related to survey and questionnaire development. The instrument was chosen for this research due to the commonality of skills deemed essential for success in the workforce. The principle researcher made contact with the developer of the instrument to gain permission to use the instrument in this research. Once Dr. Paranto's approval was obtained, the survey was modified to be made relevant to the health educator position while maintaining coverage of the major skills identified in the original instrument. As the researcher's interest was in creating a profile of campus health educator's skill, the instrument has been adapted to examine the range of skills required for the campus health educator to be successful. In addition, questions have been added to create a clear understanding of the individuals in this role. These questions deal with certifications obtained, actual position title, education level, willingness to participate in follow-up, and opinion on areas of improvement in educational systems for health educators.

Due to the modifications of survey instrument, the current instrument was piloted through two focused field tests. The first field test involved having the document reviewed by a statistician, a survey development expert, and a current health educator. The suggestions and feedback provided by these individuals were incorporated into a revision of the initial model. To ensure face validity, a second focus field test was conducted. For this field test, the instrument was shared with two directors of health education as well as twelve individuals who serve actively as health educators in a health care system. To help ensure readability, clarity of instructions, terms and questions utilized, a cover letter was distributed to the focus group discussing the feedback requested. The researcher requested a critique, including suggestions for improvement, of the cover letter and survey. The feedback acquired from the second focused field study was then applied resulting in the final draft of the survey instrument. Actual college health educators were not utilized in field testing so as to prevent sample contamination resulting in sample size diminution.

The current instrument assessed the level of perceived importance of core skills and competencies needed for the position of health educator on a college campus. Responses were rated on a 5-point Likert scale (Likert, 1932). In addition, the

instrument was intended to provide a descriptive portrait of a campus health educators in higher education through open-ended response questions.

All questionnaires have received approval for use with human studies from the Institutional Review Board at Virginia Tech. The letter of approval is included in Appendix C.

A copy of the final version of the survey that resulted from the focused field tests can found in Appendix C.

Data Collection

Data for this study were collected from health educators employed at institutions of higher education in the state of Virginia. Targeted participants were identified as having the role of campus health educator either because of their job titles or because they were recognized as having the responsibility of the health educator role.

A list of 46 target individuals was been compiled with their name, title, and contact information. Each potential respondent was e-mailed a cover letter, including a link that connected him or her to a web-based survey instrument via Survey.vt.edu. This tool was chosen as the method of dissemination of the survey in anticipation of a greater response due to the convenience of complying with the request. Upon initially contacting potential participants, an option for a paper version of the survey was also offered.

Due to the anonymity of the web-based survey, all subjects, regardless of whether they might have already responded, received two follow up reminders by e-mail at week one and week two following the initial request. Three weeks after the initial e-mail request, a follow up phone call was made to each member of the sample to ensure that the correct contact information was obtained. Finally, five weeks following the initial survey request, a paper copy request was sent to each of the targeted individuals. The final request included a paper copy of the survey, a postage paid envelope, and a Starbucks gift certificate for \$5.00 as well as a reminder that participants still could complete the on-line version of the survey. This final follow up resulted in a 44.7% increase in returned surveys.

The completed answers to the survey were exported into a database for analytical purposes.

Data Analysis

The data were initially screened using Z scores and a scatter plot to uncover any recording errors and out-of-range responses. Descriptive statistics were utilized to determine the level of perceived importance of core skills. Mean and median scores were assessed for questions related to core skills (questions 2-14). The survey questions (preceded by their numbers) for which this was done were: 2) Experience in dealing with “real world” problems; 3) Technical Skills (integrating a motor/technical skill, such as the use of a computer, with other abilities); 4) Ability to adapt to rapidly changing technologies (computers, etc.); 5) Critical thinking skills (ability to evaluate decisions/solutions; 6) Written communication skills; 7) Oral communication skills; 8) Listening skills; 9) Analytical skills (quantitative ability such as the ability to create, evaluate, and process data needed for programming needs and assessment; 10) Creative thinking skills (innovative, new ideas); 11) Leadership ability required in your job; 12) Interpersonal skills (ability to work with others; 13) Professional ethics (in accordance with formal or professional rules of right and wrong; and 14) Professionalism (the conduct, aims or qualities that characterize a profession. The mean and median scores for each skill were ranked in descending order. Further descriptive statistics, such as variance and frequency, were also examined.

A matrix was created to illustrate the ranked importance of each core skills versus its presence in the CHES exam’s expected competencies and sub-competencies.

The open-ended questions asked about the participant’s qualifications as well as interest in developing and opinion about health promotion programs. Further details were queried in questions 17 (Please list your undergraduate degree/major and year), 18 (Please list all other degree(s)/major(s) and year(s)), and 19 (What is your current job title?), 20 (Are you CHES certified? If so, what year?), 15 (If given the opportunity, I would participate in building the course curriculum of Health Promotion programs in higher education), 16 (If given the opportunity, I would participate in the evaluation of students in Health Promotion programs in higher education). 21 (What is something that you would like to see added into course curriculum of Health Promotion students?) and 22 (What advice would you give to other Health Promotion students to help them achieve success in their career?) were examined to create a clear understanding of the

characteristics and opinions of campus health educators. These questions were used to determine the credentialing, education and views of a campus health educator to develop accurate conclusions, implications, and areas of further research development based on the current findings. Due to the nature of the data, coding had to occur for questions 17 (Please list your undergraduate degree/major and year), 18 (Please list all other degree(s)/major(s) and year(s)), 19 (What is your current job title?), 20 (Are you CHES certified? If so, what year?). The data were coded in terms that were most relevant to this research. Therefore, “current job title” was coded in terms of “health related” (being a Health educator, Health Education Coordinator, Associate Director of Health Promotion, Coordinator of Wellness Education, etc.); “medically-related” (Nurse, Director of Health Services, MD, etc.); and “other” (Instructor, Health Promotion Faculty, Track Coach, etc.). Additionally, participant’s background educational area of study was coded similarly: “health related” (health promotion, health education, health communication, health and physical education, etc.); “medically-related” (nursing programs, biology, health administration, etc.); and “other” (zoology, philosophy, business, aerospace engineering, religion, etc.).

For a final aspect of the analysis, a Student’s t-test was used to analyze responses at a $p=.05$ alpha level to test if responses among the three categories of job titles differed significantly from each other in regards to the willingness to help in areas of further development in health promotion programs in higher education. This area was assessed using survey questions 15 (If given the opportunity, I would participate in building the course curriculum of Health Promotion programs in higher education), and 16 (If given the opportunity, I would participate in the evaluation of students in Health Promotion programs in higher education).

Summary of Methodology

The purpose of this study was to examine survey responses to determine the level of importance health educators perceive core skills to be in their current position. These skills were then compared to the competencies and sub-competencies included in the CHES examination. This chapter described the source of data, sample characteristics, and instrumentation (development, content and method of distribution) and statistical analyses that were utilized in this research. The data were coded and entered into SAS

software (SAS version 9.1.3, 2006) for statistical analysis to answer the research questions. In addition, a qualitative approach to data analysis was taken. The data also were entered into SPSS statistical software (SPSS for Windows version 11.0.1, 2001) to generate the figures.

CHAPTER 4: RESULTS

Profile of the Respondents

Of the forty-six individuals in the targeted sample, thirty-eight respondents returned surveys resulting in an 82.6% response rate. The following is a profile of the respondents in terms of title, education and certification status.

As indicated in Table 2, 39.5% (n=15) of the respondents held the title of health educator. The remainder of the respondents held medically-related titles such as director of health services or nurse (28.9%; n=11), or other titles, such as professor or coach (28.9%; n=11).

Table 2: Current Job Title

Current Job Title	Frequency	Percent
Valid No Answer	1	2.6%
Health Related	15	39.5%
Medical Related	11	28.9%
Other	11	28.9%
Total	38	100.0%

As indicated in Table 3, 21% (n=8) of the respondents' undergraduate educational background was a health promotion related program of study. The remaining respondents received undergraduate degrees in medically related programs of study (36.8%; n=14) and other programs unrelated to health promotion (36.7%; n=14).

Table 3: Undergraduate Program of Study

Undergraduate Program of Study		Frequency	Percent
No	Answer	2	5.3%
Health	Related	8	21.1%
Medical	Related	14	36.8%
	Other	14	36.8%
Total		38	100.0%

In terms of graduate level education, 34.2% (n=13) of respondents received a graduate degree in a health promotion-related program of study, whereas 26.3% received a graduate degree in a medically-related program (n=10) and 13.2% (n=5) had graduate degrees in another area of study (n=10). Meanwhile, 26.3% (n=10) of respondents received no degree beyond the undergraduate level.

Table 4: Graduate Program of Study

Graduate Program of Study		Frequency	Percent
Health	Related	13	34.2%
Medical	Related	10	26.3%
	None	10	26.3%
	Other	5	13.2%
Total		38	100.0%

A minority of respondents, 23.7% (n=9), reported that they were CHES certified, leaving 76.3% (n=29) not being certified.

Table 5: CHES Certification Status

CHES Certified		Frequency	Percent
Valid	No	29	76.3%
	Yes	9	23.7%
Total		38	100.0%

Table 6: CHES Certification Status by Graduate Program of Study

	Not CHES Certified	CHES Certified	Total
Health	8	5	13
Medical	8	2	10
None	8	2	10
Other	5	0	5
Total	29	9	38

As shown in table 6, of respondents received a graduate degree in a health promotion-related program of study, less than half (n=5) were CHES certified.

Perceived Importance of Identified Competencies

Each of the thirteen identified competencies were rated for their level of importance to the respondent’s work by thirty-eight respondents identified as being college-level health educators in the higher education system of Virginia.

Below are the frequency results for the level of importance attributed to each competency. Respondents indicated each skill’s level of importance on a five-point scale from low (1) to high (5).

Question 2: *Experience in dealing with ‘real world’ problems.*

Table 7: Importance of Dealing with "Real World" Problems

Rating	Frequency	Percent
Valid 3	3	7.9%
4	14	36.8%
5	21	55.3%
Total	38	100.0%

As shown above, 55.3% (n=21) respondents perceived “experience in dealing with ‘real world’ problems to have the highest level of importance.

Question 3: *Technical skills (integrating a motor/technical skill, such as the use of a computer, with other abilities.*

Table 8: Importance of Technical Skills

Rating	Frequency	Percent
Valid 2	1	2.6%
3	5	13.2%
4	22	57.9%
5	10	26.3%
Total	38	100.0%

As shown above, 57.9% (n=22) respondents perceived “technical skills” problems to score a level four in importance.

Question 4: *Ability to adapt to rapidly changing technologies (computers, etc.).*

Table 9: Importance of Ability to Adapt to Rapidly Changing Technologies

Rating	Frequency	Percent
Valid 2	1	2.6%
3	9	23.7%
4	14	36.8%
5	13	34.2%
Total	37	97.4%
Missing System	1	2.6%
Total	38	100.0%

As illustrated above, the responses regarding the ability to adapt to rapidly changing technologies were mixed with 36.8% (n=14) perceiving this core skill to be a level four in importance and 34.2% (n=13) rating it at a level five.

Question 5: *Critical thinking skills (ability to evaluate decisions/solutions).*

Table 10: Importance of Critical Thinking

Rating	Frequency	Percent
Valid 3	1	2.6%
4	8	21.1%
5	29	76.3%
Total	38	100.0%

As shown above, 76.3% (n=29) of the respondents perceived critical thinking to have the highest level of importance in their work.

Question 6: *Written communication skills.*

Table 11: Importance of Written Communication Skills

Rating	Frequency	Percent
Valid 3	3	7.9%
4	10	26.3%
5	25	65.8%
Total	38	100.0%

As illustrated above, written communication was perceived at an importance level of five by 65.8% (n=25) of the respondents.

Question 7: *Oral communication skills.*

Table 12: Importance of Oral Communication Skills

Rating	Frequency	Percent
Valid 4	4	10.5%
5	34	89.5%
Total	38	100.0%

As indicated above, 89.5% (n=34) of the respondents perceived oral communication skills at a level five importance.

Question 8: *Listening skills.*

Table 13: Importance of Listening Skills

Rating	Frequency	Percent
Valid 2	1	2.6%
4	4	10.5%
5	33	86.8%
Total	38	100.0%

This table illustrates that in the area of listening skills, 86.8% (n=33) respondents perceived this competency to be at a level five in importance.

Question 9: *Analytical skills (quantitative ability such as the ability to create, evaluate, and process data needed for programming needs and assessments).*

Table 14: Importance of Analytical Skills

Rating	Frequency	Percent
Valid 2	1	2.6%
3	7	18.4%
4	16	42.1%
5	14	36.8%
Total	38	100.0%

As exemplified above, 42.1% (n=16) of participants perceived analytical skills to be a level four in importance followed closely by 36.8% (n=14) that perceived this competency to be at a level five in importance.

Question 10: *Creative thinking skills (innovative, new ideas).*

Table 15: Importance of Creative Thinking Skills

Rating	Frequency	Percent
Valid 3	3	7.9%
4	20	52.6%
5	15	39.5%
Total	38	100.0%

The table above demonstrates that 52.6% (n=20) participants perceived competencies of creative thinking to be a level four in terms of importance, while 39.5% (n=15) rated it at level five.

Question 11: *Leadership ability required in your job.*

Table 16: Importance of Leadership Ability

Rating	Frequency	Percent
Valid 2	1	2.6%
3	2	5.3%
4	15	39.5%
5	20	52.6%
Total	38	100.0%

The table above shows that 52.6% (n=20) of respondents perceived the competency of having leadership ability to score a level five in importance.

Question 12: *Interpersonal skills (ability to work with others).*

Table 17: Importance of Interpersonal Skills

Rating	Frequency	Percent
Valid 3	1	2.6%
4	7	18.4%
5	30	78.9%
Total	38	100.0%

As exemplified above, 78.9% (n=30) respondents perceived interpersonal skills to be a level five in importance.

Question 13: *Professional ethics (in accordance with formal or professional rules of right and wrong).*

Table 18: Importance of Professional Ethics

Rating	Frequency	Percent
Valid 3	2	5.3
4	7	18.4
5	29	76.3
Total	38	100.0

The above table illustrates the competency of having professional ethics was rated at a level five in importance by 76.3% (n=29) respondents.

Question 14: *Professionalism (the conduct, aims or qualities that characterize a profession).*

Table 19: Importance of Professionalism

Rating	Frequency	Percent
Valid 3	2	5.3
4	9	23.7
5	27	71.1
Total	38	100.0

Finally, the competency of professionalism was perceived at a level five in importance by 71.1% (n=27) of the respondents.

Perceived Importance of Identified Competencies in Rank Order

A rank order of the perceived importance of each competency is listed in Table 20. Ranks are based on the mean rating. Mean was chosen due to the ability to create a

rank order from means. This was not possible with medians, for which 11 of 13 variables had a median score of five.

Table 20: Competencies in Ranked Order of Perceived Importance

Question	n	Mean	Median	Variance
Oral Communication Skills	38	4.89	5	0.09
Listening Skills	38	4.82	5	0.32
Interpersonal Skills	38	4.76	5	0.24
Critical Thinking Skills	38	4.74	5	0.25
Professional Ethics	38	4.71	5	0.32
Professionalism	38	4.66	5	0.34
Written Communication Skills	38	4.58	5	0.41
Experience dealing with "real world" problems	38	4.47	5	0.42
Leadership Ability	38	4.42	5	0.52
Creative Thinking Skills	38	4.32	4	0.38
Analytical Skills	38	4.13	4	0.66

As shown in Table 20, oral communication skills were ranked at the highest level of importance for health educators to possess, while analytical skills had the lowest level in the ranking. Despite being the lowest ranked skill, analytical skills were rated at a high level of importance with a mean score of 4.13 on a five-point scale.

Table 21 further delineates the identified thirteen ranked competencies in order of perceived importance by each categorical job position/title. Ranks are based on mean response. As before, mean was chosen due to the ability to create a rank order using means but not using median scores.

Table 21: Perceived Importance Ranking by Job Title

Job Title	Skill	Mean
Health Educator	Oral Communication Skills	4.93
	Critical Thinking Skills	4.80
	Interpersonal Skills	4.80
	Professional Ethics	4.80
	Leadership Ability	4.73
	Listening Skills	4.67
	Creative Thinking Skills	4.67
	Professionalism	4.60
	Written Communication Skills	4.53
	Experience Dealing With "Real World" Problems	4.33
	Analytical Skills	4.33
	Technical Skills	4.13
	Ability to Adapt to Rapidly Changing technologies	4.07
Medical Professional	Question	Mean
	Oral Communication Skills	4.91
	Listening Skills	4.82
	Critical Thinking Skills	4.73
	Experience Dealing With "Real World" Problems	4.64
	Interpersonal Skills	4.64
	Professionalism	4.64
	Written Communication Skills	4.55
	Professional Ethics	4.45
	Creative Thinking Skills	4.18
	Leadership Ability	4.00
	Technical Skills	3.91
	Ability to Adapt to Rapidly Changing technologies	3.90
	Analytical Skills	3.82
Other	Question	Mean
	Listening Skills	5.00
	Professional Ethics	4.91
	Oral Communication Skills	4.82
	Interpersonal Skills	4.82
	Professionalism	4.82
	Written Communication Skills	4.73
	Critical Thinking Skills	4.64
	Experience Dealing With "Real World" Problems	4.45
	Leadership Ability	4.45
	Analytical Skills	4.27
	Technical Skills	4.18
	Ability to Adapt to Rapidly Changing technologies	4.18
	Creative Thinking Skills	4.09

As shown in the above table, oral communication skills rank in the top three in importance to a health educator’s work across all job title categories. Technical skills and the ability to adapt to rapidly changing technology were ranked in the bottom three in importance to a health educator’s work across all three job title categories.

Additionally, Table 22 continues to delineate the ranked order of perceived importance by comparing rankings between CHES certified and non-certified

respondents. Ranks are based on mean response. As before, mean was chosen due to the ability to create a clear rank order, which was not the case for the median score.

Table 22: Ranking by Perceived Importance by Certification Status

Status	Question	Mean
Non-Certified	Listening Skills	4.93
	Oral Communication Skills	4.93
	Interpersonal Skills	4.79
	Professionalism	4.76
	Professional Ethics	4.76
	Critical Thinking Skills	4.72
	Written Communication Skills	4.66
	Experience Dealing With "Real World" Problems	4.62
	Leadership Ability	4.34
	Creative Thinking Skills	4.28
	Analytical Skills	4.10
	Technical Skills	4.03
	Ability to Adapt to Rapidly Changing technologies	3.96
Certified	Oral Communication Skills	4.78
	Critical Thinking Skills	4.78
	Interpersonal Skills	4.67
	Leadership Ability	4.67
	Professional Ethics	4.56
	Listening Skills	4.44
	Creative Thinking Skills	4.44
	Written Communication Skills	4.33
	Ability to Adapt to Rapidly Changing technologies	4.33
	Professionalism	4.33
	Analytical Skills	4.22
	Technical Skills	4.22
	Experience Dealing With "Real World" Problems	4.00

As described above, oral communication skills remain in the top two of ranked importance among both the certified and uncertified groups. Additionally, interpersonal skills rank in the top three in importance among both groups. Technical and analytical skills rank in the bottom three in importance to a health educator's work for both groups.

Perception of importance of competency required in a specialized area of health promotion

Question one on the survey addressed the level of importance respondents attributed to specialized competency in health promotion, again rated on a five-point Likert scale. The results are listed in Table 23.

Table 23: Perceived Level of Importance for Specialized Competency

Category	Position/Title	Mean
All Respondants	All	4.24
By Postion	Health Related	4.27
	Medical Related	3.90
	Other	4.55

This question is described separately as it is not considered a soft skill but rather addresses a learned area of specialization.

The Willingness to Help

A Student’s t-test was used to analyze responses at a $p=.05$ alpha level to test if there were statistically significant differences among responses in regard to the willingness to help in areas of further development in health promotion programs in higher education.

Table 24: Willingness to Help

	Build Curriculum	Evaluate Students
Position	P-value	P-value
Health Related	0.0017**	0.0012** *highly significant
Medical Related	0.59	0.11
Other	0.08	0.18

As indicated in Table 24, respondents in positions with health-related titles responded as being significantly different in their willingness to help in areas of health promotion course curriculum development as well as evaluation of students in health promotion courses in higher education compared to those with medically-related or other job titles.

Competencies Represented on the CHES Exam

All thirteen of the core competencies were found to be present on the National Commission for Health Education Credentialing, Inc. (CHES) certification.

As illustrated in Table 25, three areas of the CHES exam address the competency of “experience in dealing with “real world” problems.”

Table 25: Experience in Dealing with "Real World" Problems as Represented on the CHES Certification Exam

Area	Competency	Sub-Competencies
Area II: Plan Health Education Strategies, Interventions and Programs	Competency A: Involve people and organizations in program planning	1. Identify populations for health education programs
		2. Elicit input from those who will affect or be affected by the program
		3. Obtain commitments from individuals who will be involved
		4. Develop plans for promoting collaborative efforts among health agencies and organizations with mutual interests
Area III: Implement Health Education Strategies, Interventions and Programs	Competency A: Initiate a plan of action	1. Use community organization principles to facilitate change conducive to health
		2. Pretest learners to determine baseline data relative to proposed program
	Competency B: Demonstrate a variety of skills in delivering strategies, interventions and programs	1. Use instructional technology effectively
		2. Apply implementation strategies
	Competency C: Use a variety of methods to implement strategies, interventions and programs	1. Use the Code of Ethics in professional practice
		2. Apply theoretical and conceptual models from health education and related disciplines to improve program delivery
		3. Demonstrate skills needed to develop capacity for improving health status
		4. Incorporate demographically and culturally sensitive techniques when promoting programs
		5. Implement intervention strategies to facilitate health-related change
	Competency D: Conduct training programs	
Area V: Administer Health Education Strategies, Interventions and Programs	Competency A: Exercise organizational leadership	1. Conduct strategic planning
		2. Analyze the organization's culture in relationship to program goals
		3. Promote cooperation and feedback among personnel related to the program
	Competency B: Secure fiscal resources	
	Competency C: Manage human resources	1. Develop volunteer opportunities
	Competency D: Obtain acceptance and support for programs	

As demonstrated in Table 26, the competency of “technical skills (integrating a motor/technical skill, such as the use of a computer, with other abilities)” was found to be represented in four areas of the CHES exam.

Table 26: Technical Skills As Represented on the CHES Certification Exam

Area	Competency	Sub-Competencies
Area I: Assess Individual and Community Needs for Health Education	Competency A: Access existing health related data	1. Identify diverse health-related databases
		2. Use computerized sources of health-related information 3. Determine the compatibility of data from different data sources
	Competency B: Collect health-related data	1. Use appropriate data-gathering instruments
Area III: Implement Health Education Strategies, Interventions and Programs	Competency A: Initiate a plan of action	3. Deliver educational technology effectively
	Competency B: Demonstrate a variety of skills in delivering strategies, interventions and Programs	1. Use instructional technology effectively
Area VI: Serve as a Health Education Resource Person	Competency A: Use health-related information resources	4. Access health information resources
		5. Employ electronic technology for retrieving references
Area VII: Communicate and Advocate for Health and Health Education	Competency B: Apply a variety of communication methods and techniques	6. Use oral, electronic and written techniques for communicating health education information

As exemplified in Table 27, the competency of the “Ability to adapt to rapidly changing technologies (computers, etc.)”, was found to be addressed in three areas of the CHES exam.

Table 27: Ability to Adapt to Rapidly Changing Technologies as Represented on the CHES Certification Exam

Area	Competency	Sub-Competencies
Area I: Assess Individual and Community Needs for Health Education	Competency A: Access existing health related data	1. Identify diverse health-related databases
		2. Use computerized sources of health-related information 3. Determine the compatibility of data from different data sources
Area III: Implement Health Education Strategies, Interventions and Programs	Competency B: Demonstrate a variety of skills in delivering strategies, interventions and programs	1. Use instructional technology effectively
Area VI: Serve as a Health Education Resource Person	Competency A: Use health-related information resources	1. Match information needs with the appropriate retrieval systems
		2. Select a data system commensurate with program needs

As illustrated in Table 28, two areas of the CHES exam addresses the competency of “Critical thinking skills (ability to evaluate decisions/solutions).”

Table 28: Critical Thinking Skills as Represented on the CHES Certification Exam

Area	Competency	Sub-Competencies
Area I: Assess Individual and Community Needs for Health Education	Competency E: Identify factors that foster or hinder the process of health education	1. Determine the extent of available health education services
		2. Identify gaps and overlaps in the provision of collaborative health services
Area II: Plan Health Education Strategies, Interventions and Programs	Competency C: Formulate appropriate and measurable program objectives	1. Design developmentally appropriate interventions
	Competency D: Develop a logical scope and sequence plan for health education practice	1. Determine the range of health information necessary for a given program of instruction
		2. Select references relevant to health education issues or programs
	Competency E: Design strategies, interventions and programs consistent with specified objectives	
	Competency F: Select appropriate strategies to meet objectives	1. Analyze technologies, methods and media for their acceptability to diverse groups
	Competency G: Assess factors that affect implementation	1. Determine the availability of information and resources needed to implement health education programs for a given audience
		2. Identify barriers to the implementation of health education programs

As presented in Table 29, the competency of “written communication skills” is represented on the CHES exam in area VII.

Table 29: Written Communication Skills as Represented on the CHES Certification Exam

Area	Competency	Sub-Competencies
Area VII: Communicate and Advocate for Health and Health Education	Competency B: Apply a variety of communication methods and techniques	1. Assess the appropriateness of language in health education messages
		4. Use culturally sensitive communication methods and techniques
		6. Use oral, electronic and written techniques for communicating health education information
		7. Demonstrate proficiency in communicating health information and health education needs

As described in Table 30, the CHES exam addresses the competency of “oral communication skills” in area VII.

Table 30: Oral Communication Skills as Represented on the CHES Certification Exam

Area	Competency	Sub-Competencies
Area VII: Communicate and Advocate for Health and Health Education	Competency B: Apply a variety of communication methods and techniques	1. Assess the appropriateness of language in health education messages
		4. Use culturally sensitive communication methods and techniques
		6. Use oral, electronic and written techniques for communicating health education information
		7. Demonstrate proficiency in communicating health information and health education needs

As illustrated in Table 31, the competency of “listening skills” is addresses by the CHES exam in areas VI and VII.

Table 31: Listening Skills as Represented on the CHES Certification Exam

Area	Competency	Sub-Competencies
Area VII: Communicate and Advocate for Health and Health Education	Competency B: Apply a variety of communication methods and techniques	3. Respond to public input regarding health education information
Area VI: Serve as a Health Education Resource Person	Competency B: Respond to requests for health information	1. Identify information sources needed to satisfy a request

As exemplified in Table 32, the competency of “analytical skills (quantitative ability such as the ability to create, evaluate, and process data needed for programming needs and assessment)” was found to be represented extensively in four areas of the CHES exam.

Table 32: Analytical Skills as Represented on the CHES Certification Exam

Area	Competency	Sub-Competencies
Area I: Assess Individual and Community Needs for Health Education	Competency A: Access existing health related data	3. Determine the compatibility of data from different data sources
	Competency B: Collect health-related data	1. Use appropriate data-gathering instruments
		2. Apply survey techniques to acquire health data
		3. Conduct health-related needs assessments
		4. Implement appropriate measures to assess capacity for improving health status
	Competency F: Infer needs for health education from obtained data	1. Analyze needs assessment data
Area III: Implement Health Education Strategies, Interventions and Programs	Competency A: Initiate a plan of action	2. Pretest learners to determine baseline data relative to proposed program
Area IV: Conduct Evaluation and Research Related to Health Education	Competency A: Develop plans for evaluation and research	1. Synthesize information presented in the literature
		2. Evaluate research designs, methods and findings presented in the literature
	Competency B: Review research and evaluation procedures	1. Evaluate data-gathering instruments and processes
		2. Develop methods to evaluate factors that influence shifts in health status
	Competency C: Design data collection instruments	1. Develop valid and reliable evaluation instruments
		2. Develop appropriate data-gathering instruments
	Competency D: Carry out evaluation and research plans	1. Use appropriate research methods and designs in health education practice
		2. Use data collection methods appropriate for measuring stated objectives
		3. Implement appropriate qualitative and quantitative evaluation techniques
		4. Implement methods to evaluate factors that influence shifts in health status
	Competency E: Interpret results from evaluation and research	1. Analyze evaluation data
		2. Analyze research data
3. Compare evaluation results to other		
4. Report effectiveness of programs in achieving proposed objectives		
Competency F: Infer implications from findings for future health-related activities		
Area VI: Serve as a Health Education Resource Person	Competency A: Use health-related information resources	2. Select a data system commensurate with program needs

As described in Table 33, the competency of “creative thinking skills (innovative, new ideas)” is represented on the CHES exam in three areas.

Table 33: Creative Thinking Skills as Represented on the CHES Certification Exam

Area	Competency	Sub-Competencies
Area II: Plan Health Education Strategies, Interventions and Programs	Competency A: Involve people and organizations in program planning	4. Develop plans for promoting collaborative efforts among health agencies and
	Competency B: Incorporate data analysis and principles of community organization	3. Suggest approaches for integrating health education within existing health programs
Area IV: Conduct Evaluation and Research Related to Health Education	Competency B: Review research and evaluation procedures	2. Develop methods to evaluate factors that influence shifts in health status
	Competency C: Design data collection instruments	1. Develop valid and reliable evaluation instruments 2. Develop appropriate data-gathering instruments
Area V: Administer Health Education Strategies, Interventions and Programs	Competency A: Exercise organizational leadership	1. Conduct strategic planning

As shown in Table 34, the CHES exam addresses the competency of “leadership ability required in your job” in four areas.

Table 34: Leadership Ability in the Context of Job Requirements Represented on the CHES Certification Exam

Area	Competency	Sub-Competencies
Area III: Implement Health Education Strategies, Interventions and Programs	Competency A: Initiate a plan of action	1. Use community organization principles to facilitate change conducive to health 4. Facilitate groups
	Competency C: Use a variety of methods to implement strategies, interventions and programs	3. Demonstrate skills needed to develop capacity for improving health status
		5. Implement intervention strategies to facilitate health-related change
	Competency D: Conduct training programs	
Area V: Administer Health Education Strategies, Interventions and Programs	Competency A: Exercise organizational leadership	1. Conduct strategic planning 3. Promote cooperation and feedback among personnel related to the program
Area VI: Serve as a Health Education Resource Person	Competency D: Establish Consultative Relationships	2. Analyze the role of the health educator as a liaison between program staff and outside groups and organizations
		3. Act as a liaison among consumer groups, individuals and health care providers
		4. Apply networking skills to develop and maintain consultative relationships
		5. Facilitate collaborative training efforts among health agencies and organizations
Area VII: Communicate and Advocate for Health and Health Education	Competency B: Apply a variety of communication methods and techniques	7. Demonstrate proficiency in communicating health information and health education needs
	Competency C: Promote the health education profession individually and collectively	1. Develop a personal plan for professional development
	Competency D: Influence health policy to promote health	1. Identify the significance and implications of health care providers’ messages to consumers

As illustrated in Table 35, the CHES exam addresses the competency of “interpersonal skills (ability to work with others)” in four areas.

Table 35: Interpersonal Skills as Represented on the CHES Certification Exam

Area	Competency	Sub-Competencies
Area II: Plan Health Education Strategies, Interventions and Programs	Competency A: Involve people and organizations in program planning	2. Elicit input from those who will affect or be affected by the program 3. Obtain commitments from individuals who will be involved
Area III: Implement Health Education Strategies, Interventions and Programs	Competency A: Initiate a plan of action	4. Facilitate groups
Area V: Administer Health Education Strategies, Interventions and Programs	Competency A: Exercise organizational leadership	3. Promote cooperation and feedback among personnel related to the program
	Competency C: Manage human resources	1. Develop volunteer opportunities
Area VI: Serve as a Health Education Resource Person	Competency D: Establish Consultative Relationships	1. Analyze parameters of effective consultative relationships 2. Analyze the role of the health educator as a liaison between program staff and outside groups and organizations 3. Act as a liaison among consumer groups, individuals and health care providers 4. Apply networking skills to develop and maintain consultative relationships 5. Facilitate collaborative training efforts among health agencies and organizations

Table 36, elucidates that the CHES exam addresses the competency of “professional ethics (in accordance with formal or professional rules of right and wrong)” in area III.

Table 36: Professional Ethics as Represented on the CHES Certification Exam

Area	Competency	Sub-Competencies
Area III: Implement Health Education Strategies, Interventions and Programs	Competency C: Use a variety of methods to implement strategies, interventions and programs	1. Use the Code of Ethics in professional practice

Finally, as illustrated in Table 37, “professionalism (the conduct, aims or qualities that characterize a profession)” is addressed in area VII on the CHES exam.

Table 37: Professionalism as Represented on the CHES Certification Exam

Area	Competency	Sub-Competencies
Area VII: Communicate and Advocate for Health and Health Education	Competency B: Apply a variety of communication methods and techniques	7. Demonstrate proficiency in communicating health information and health
	Competency C: Promote the health education profession individually and collectively	1. Develop a personal plan for professional development
	Competency D: Influence health policy to promote health	1. Identify the significance and implications of health care providers' messages to

Discussion

The data revealed that all of the competencies examined in the survey were perceived to be above average in regards to importance in the respondents' current job position, with oral communication, listening skills and interpersonal skills being ranked in the top three. Further, oral communication and interpersonal competencies ranked in the top five regardless of job title or certification status. While the literature review did not specifically indicate that these competencies should be included in health educators' general job descriptions or areas of responsibility, individuals in the health educator role deemed them to be of high importance in their position.

Interestingly, the CHES exam's comprehensiveness is indicated by its inclusion of each of the thirteen competencies examined in this research. Each competency was addressed on the exam in at least one, and as many as four, separate sections. While the CHES exam appears to be an adequate assessment of competencies and skills desired by employers and deemed important by individuals in the field, concerning 76% of respondents reported that they were not CHES certified.

Demographic findings were interesting in that only 40% of the respondents held a job title related directly to health education. The remainder of the sample (29%) held other titles while being assigned to the duties of that of a health educator position.

Moreover, only 21% of respondents graduated from a program of study that was directly related to health education. This could be a determinant of the large percentage of individuals who are not CHES certified in that having a higher education degree in health education is a requirement for taking the exam. In a final analysis, it was found that respondents who held job titles directly related to health education responded that they were much more willing than those with medically-related or other job titles to assist in developing health education programs for higher education in the areas of curriculum development and student evaluation.

Further discussion, conclusions, and recommendations regarding the findings of this research will be addressed in chapter 5.

CHAPTER 5: DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

Discussion

The purpose of this research was to examine the perceptions of college health educators regarding the importance of core skills such as the ability to deal with real world situations; the ability to integrate technical skills, such as the use of a computer, into one's work; the ability to adapt to rapidly changing technologies; the ability to evaluate decisions and create solutions; written and oral communication skills; listening skills; analytical skills; creative thinking skills; leadership ability; interpersonal skills; professional ethics; and professionalism. Additionally, the CHES certification was analyzed for its inclusion of the competencies deemed important by health educators at institutions of higher education in Virginia.

Demographics

The researcher received thirty-eight (n=38) completed surveys, representing an 83% response rate. Each of the targeted campuses claimed to have at least one individual whose work is dedicated to the responsibility of disseminating health education to the student body. However, of the respondents, 40% (n=15) held a job title related directly to health education, while 29% (n=11) held a job title related to the medical field, such as nurse or director of health services. The remaining 29% (n=11) held positions as faculty or coaches and had the added responsibility of disseminating health education.

In the area of undergraduate degrees received, interestingly a mere 21% (n=8) of respondents graduated from a program of study that was directly related to health education. While the majority of programs of study were found to be either medically

related (37%; n=14), such as nursing or biology, or other (37%; n=14) unrelated areas, such as religion or philosophy. Conversely, graduate degrees obtained were more directly related to health education (34%; n=13) as opposed to medical related (26%; n=10) or other (26%; n=10) non-related programs of study.

Perhaps the most interesting finding relates to whether respondents were CHES certified. The CHES exam is identified as a certification that clearly defines expected competencies of individuals in the field of health education. This certification elicits a great deal of respect and is supported by a prominent organization that ensures appropriate levels of professionalism for health educators (NCHEC). Surprisingly, 76% (n=29) of respondents reported that they were not CHES certified.

Research Question #1

Research question one asked “what level of importance do campus health educators feel that core skills hold in their current job?” The data supports the research in that all of the competencies chosen were perceived to be above average (score of 3) in regards to importance in their current job position, with oral communication, listening skills and interpersonal skills being ranked in the top three. Upon further examination, it was found that oral communication and interpersonal competencies ranked in the top five regardless of job title or certification status.

Research Question #2

The second research question to be addressed by this research asked “are these core skills present on the National Commission for Health Education Credentialing, Inc. (NCHEC) Certified Health Education Specialist (CHES) certification?” The CHES exam addresses each of the thirteen competencies examined in this research in at least one, and

as many as four, separate areas of the exam. For example, oral communication is addressed on the CHES exam in area VII through the sub-competencies listed as “Assess the appropriateness of language in health education messages”; “Use culturally sensitive communication methods and techniques”; “Use oral, electronic and written techniques for communicating health education information”; and “Demonstrate proficiency in communicating health information and health education needs.” Interpersonal skills are also addressed by CHES in four separate areas: Area II, relating to the involvement of people and organizations for program planning; Area III relating to facilitating groups; Area V relating to organizational leadership and managing human resources; and Area VI relating to establishing relationships.

Additional Findings

The question of “perceived level of importance for specialized competency” was examined in this research separately from other skills. The reason for this is that this question relates to disciplinary expertise and, in contrast to the other thirteen competencies, is not considered a soft skill. The term of specialized competency refers to the knowledge of a specific area of content matter that could be learned from educational material such as a textbook or instruction manual. Interestingly, this competency rated among the lowest in perceived importance with a mean rating of 4.2 mean overall.

The willingness to participate in development of the field of health education also was examined. This area encompassed willingness in regards to building course curricula for health education programs in higher education as well as evaluation of the students in these programs. Perhaps one of the most interesting findings of this research

occurred in this area. It was found that respondents who held job titles directly related to health education responded that they were much more willing than those with medically-related or other job titles to assist in developing higher education in the areas of curriculum development and student evaluation.

While the mean score in willingness to help in terms of curriculum development was a mere 3.6, a total of 23 respondents (61%) commented on subject matter that they would like to see added to the course curriculum in health education programs. Some of the suggestions for topics were:

- *“Communication/interpersonal skills for health educators”*
- *“Technical writing.”*
- *“Work ethics/job profession.”*
- *“More critical thinking situations.”*
- *“Emerging technology and its application in the field”*
- *“Patient prospective education along with education related to the financial and business side of health promotion.”*
- *“Statistics or some sort of additional class including how to create assessments and evaluate data.”*
- *“OJT [on the job training] skills such as—running meetings, serving on committees public relations, etc.”*

A final area of assessment occurred in the question concerning the offering of advice to help others achieve career success. Some of the suggestions were:

- *“Take additional courses”*

- *“Many of our students choose health promotion because they aren’t sure what they want to do or because they decide nursing isn’t for them. They need to set academic and career goals early.”*
- *“You have to work and wait to achieve your highest optimal level of professional satisfaction. It doesn’t automatically come with your degree.”*
- *“I would encourage them to keep their options broad in their search for a job. Also, to keep up with technology and different methods of delivering information to the populations they will be working with in their careers.”*
- *“Get a mentor – listen & learn.”*
- *“Gain as much real experience as you can.”*
- *“Choose a career that you are passionate about.”*
- *“Maintain professionalism and courteous to others.”*
- *“Get an internship”*
- *“Strong presentation skills are critical.”*
- *“The best thing you can do for your career is to develop and nurture your problem-solving skills.”*
- *“Understand that a degree isn’t everything they need. Experience at all aspects of field & continuing education are critical.”*

The above comments were consistent with those concerns identified in the current literature in areas of real world experience, communication skills, interpersonal skills, critical thinking skills, ability to adapt to rapidly changing technology, analytical skills,

professional ethics and professionalism. Interestingly, other themes also identified in the current literature relate to job satisfaction and realistic expectations of the chosen career path.

Conclusions

Current research shows that employers feel as though college graduates are ill prepared when entering the workforce in regards to their employability skills (Peddle 2000; Atkins, 1999; Hofstrand, 1996; Shivpuri & Kim, 2004). Additionally, students themselves are reporting dissatisfaction once their careers commence due to a perceived lack of preparation derived from their college experience as well as disillusionment with job realities.

There appears to be a disconnect between education and employment. Employers expect a certain level of preparedness from the college graduates they employ. Additionally, higher education intends to produce graduates that have attained a certain level of achievement scholastically. The National Commission for Health Education Credentialing, Inc. strives to ensure that health educators are prepared to perform with an appropriate level of professionalism. Promisingly, the CHES exam addresses each of the major competencies found to be of greatest importance in a health educator's work, according to the survey of Virginia health educators presented here. Unfortunately, being CHES certified is not a requirement for employment as a health educator in institutions of higher education in the state of Virginia, representing another potential disconnect.

It is interesting to point out that although respondents provided a number of suggestions for subject matter to add to the course curriculum of health promotion

students, only a select few were willing to help in regards to actual development of this curriculum.

These findings cannot be generalized to the workforce population at large because of the limited nature of the sample selected, nor can the findings be generalized to the field of health education as a whole. Moreover, the data collected was based on respondent's perceptions about skill importance, which could be erroneous. Despite these limitations, this study provided a unique opportunity to examine how health educators in Virginia institutions of higher education rate the competencies relevant to their job performance. To more clearly identify and understand the level of preparedness and elements of educational satisfaction as they relate to employability for health educators, future research can build on the data presented here. The next section addresses recommendations for future research.

Recommendations for Future Research

The current literature lacks specificity on higher education's deficits in preparing students for employment. More specific research is needed to determine the details of and specific basis for the adverse perceptions held by employers, as well college graduates, in regards to preparation derived from higher education. Once these issues are made clear, perhaps a plan could be created to address the voids.

Moreover, there is a need to address the issue of hiring standards and criteria for continued employment as a health educator. Clearly, the CHES exam addresses competencies that have been identified as being of high importance in the workplace. Therefore, one could question as to why the CHES exam is not being used as an

employability requirement for positions of health education in institutions of higher education.

Finally, there is a need for further investigation into the willingness of employers to participate in improving the preparation that college graduates receive. This should include collaboration among institutions of higher education and employers. The researcher recommends using qualitative methods such as focus groups involving both educators and employers as a basis for this inquiry. Qualitative methods could provide a clearer understanding of the perspectives, needs, expectations and willingness to participate in collaborative efforts from both the employer side and the higher education side.

Summary

Every year millions of individuals begin a college career with expectations of becoming employed in a desired career upon graduation. Conversely, employers are becoming increasingly apprehensive about hiring new graduates as they view it as a professional risk to do so. There is a perception from employers that college graduates do not possess certain highly important competencies such as communication and interpersonal skills. For this study, the researcher examined the perceptions regarding the importance of selected competencies in relation to career success of individuals who currently serve in the role of health educator in institutions of higher education in Virginia. Additionally, the CHES exam was analyzed for inclusion of these competencies. It is suggested that based on the results of this study, further investigation is needed into the basis for perceptions held by employers that recent college graduates lack employability skills as well as into the disconnect between higher education and

employment. The researcher recommends examining the specific origin of perceptions of inadequate preparation as well as the feasibility of collaborative efforts between employers and educators.

REFERENCES

- (1995). Career Preparation Assessment. Portfolio Guidelines. U.S. California.
- (1995). Conference Board of Canada; Employability Skills Profile: What are Employers looking for? www2.conferenceboard.ca/nbec/eprof-e.htm
- (1995). Documenting Student Competence through Effective Performance Assessment: Employability Skills. Workshop Summary. U.S
- (1995). Employability. Occupational Competency Analysis Profile. U.S.
- (2007). Employability Skills Profile. Retrieved Sept. 18, 2007 from www.conferenceboard.ca/educaton.
- (1997). NCHIE. Higher Education in the Learning Society, Report of the National Committee of Inquiry into Higher Education: "The Dearing Report" Norwich: HMSO.
- (1991). Report of the 1990 Joint Committee on Health Education Terminology. *Journal of Health Education*. 22:97-108.
- (1991). Secretary's Commission on Achieving Necessary Skills, What Work Requires of Schools: A SCANS Report for America 2000. Washington, D.C.: US department of Labor.
- (1995). Study of School-to-Work Reform Initiatives. Volume II: Case Studies. Studies of Education Reform Series. U.S.
- (1995). Study of School-to-Work Reform Initiatives. Volume III: Technical Appendix-- Research Design and Methodology. Studies of Education Reform Series. U.S. District of Columbia.
- (1995). Teaching and Learning--Towards the Learning Society. White Paper on Education and Training. Belgium.
- (1999). A Teacher's How-to Guide for School-to-Work with Interactive Lesson Plans. U.S.Ohio.
- (2000). Employability Skills: Middle Grades, 1999-2000. Issue 4. Ohio's Career Development Program. U.S.Ohio.
- (2000). Report of the 2000 Joint Committee on Health Education and Promotion Terminology. Report of the 2000 Joint Committee on Health Education and Promotion Terminology 72(1): 3-7.
- (2000). Making Standards Work! History. A Teacher's Guide to Contextual Learning: Integrating Academic Content Standards with Career Development and Workplace Competencies. U.S.Colorado.
- Ananda, S. M. and et al. (1995). Skills for Tomorrow's Workforce. Policy Briefs. U.S. California.
- Aristotle. (1985). The Nichomachean Ethics. T. Irwin (Trans). Indianapolis: Hackett Publishing.
- Aristotle. (1996). The Politics and Constitution of Athens. S Everson (ed). Cambridge: Cambridge University Press.
- Atkins, M. J. (1999). Oven-ready and Self-basting: Taking Stock of Employability Skills. Teaching in Higher Education. 4: 267-280.

- Atlay, M. and R. Harris (2000). "An Institutional Approach to Developing Students' 'Transferable' Skills." Innovations in Education and Training International **37**(1): 76-84.
- Backes, C. (2001). "Teaching Essential Skills through Cooperative Partnerships." ATEA Journal **28**(2-3): 10-12.
- Barthorpe, S. and M. Hall (2000). "A Collaborative Approach to Placement Preparation and Career Planning for University Students: A Case Study." Journal of Vocational Education & Training: The Vocational Aspect of Education **52**(2): 165-175.
- Bell, C. and J. Rodman (1995). A Critical Link in School-to-Work: Teaching Employment Skills. VICA 177--Employment Skills. U.S. New Mexico.
- Berkeley, J. (1995). In Pursuit of Lifelong Employability: Priorities for Initial Formation. Vocational Training: European Journal: 53-60.
- Blackburn, B. R., C. P. McNulty, et al. (2003). Workforce Development in the Classroom. Techniques: Connecting Education and Careers. **78**: 30-33.
- Bragg, D. D. and R. E. Hamm (1995). The Opportunities for "School-to-Work": A National Study of Work-Based Learning in U.S. Community Colleges. Community College Journal: 39-44.
- Brennan, J. (2000). "Graduate Employment: A Review of the Issues." Bristol, HEFCE.
- Brown, B. L. (2002). School to Work after the School to Work Opportunities Act. Myths and Realities. U.S. Ohio.
- Brown, P., A. Hesketh, et al. (2002). Employability in a Knowledge-driven Economy. Journal of Education and Work. **16**: 107-126.
- Callanan, G. and C. Benzing (2004). "Assessing the Role of Internships in the Career-Oriented Employment of Graduating College Students." Education + Training **46**(2): 82-89.
- Candy, P. & Crebert C. (1996). "Reaffirming a Proud Tradition: Universities and the Promotion of Lifelong Learning." Draft Paper Improving University Teaching, 22-25 July International Conference, The Nottingham Trent University, Nottingham.
- Careerplanner.com. (2007). Job Description for Health Educators. Retrieved September 28, 2007, from the World Wide Web: <http://www.careerplanner.com/job-descriptions/health-educators.cfm>.
- Carnevale, Anthony P. (1990). New Developments in Worker Training: A Legacy for the 1990's. Madison, WI : Industrial Relations Research Association, c1990..
- Chaffee, E. E. (1990). "Strategies for the 1990's." New Directions for Higher Education: An Agenda for the New Decade **70**: 59-65.
- Churchill, S. (1995). Projecting a Career: Industry and Education Working Together in Bexley. Education and Training: 28-31.
- Claus, R. N. and B. E. Quimper (1995). Employer Survey, 1995. U.S. Michigan.
- Cote, N., Goldman, S.R., & Saul, E. (1998). "Students Making Sense of Informational Text: Relations Between Processing and Representation." Discourse Processes **25** 1-53.

- Cottrell, R.R., Girvan, J.T., McKenzie J.F. (2006). Principles and Foundations of Health Promotion and Education, 3rd edition. Pearson Benjamin Cummings: San Francisco, CA.
- Cox, S. and D. King (2006). "Skill Sets: An Approach to Embed Employability in Course Design." Education & Training **48**(4): 262-274.
- Cranmer, S. (2006). "Enhancing Graduate Employability: Best Intentions and Mixed Outcomes." Studies in Higher Education **31**(2): 169-184.
- Cumming, T. and G. Lesniak (2000). Improving Employability Skills through Cooperative Education and Tech Prep. U.S. Illinois.
- Curtin, T. (2000) Economic and Health Efficiency of Education Funding Policy. Social Sciences and Medicine. **48**(11): 1599-1611.
- Dearing, R. (1997). Report of National Committee of Inquiry into Higher Education. DfEE, London.
- Dennis, D.L. (2002). The CHES Examination: Behind the Scenes. The National Commission for Health Education Credentialing, Inc. Retrieved September 28, 2007, from the World Wide Web: <http://nchec.org/becomeches/behindscenes.asp>.
- de Weert, E. (1994). Translating Employment Needs into Curriculum Strategies. Higher Education Management. **6**: 305-320.
- Evenson, R. (1999). "Soft Skills, Hard Sell." Techniques: Making Education and Career Connections **74**(3): 29-31.
- Fallows, S. and C. Steven (2000). "Building Employability Skills into the Higher Education Curriculum: A University-wide Initiative." Education + Training **42**(2): 75-82.
- Fallows, S. and G. Weller (2000a). "Transition from Student to Employee: A Work-based Programme for "Graduate Apprentices" in Small to Medium Enterprises." Journal of Vocational Education & Training: The Vocational Aspect of Education **52**(4): 665-685.
- Fallows, S., Weller, G (2000b). "Graduate Apprenticeship Scheme " Intergrating Key Skills in Higher Education: 119-131.
- Freeman, S. (2000). "Partnership Between Small and Medium Enterprises and Universities that Add Value." Education Training **42**(6): 372-7.
- Ganzel, R. (2001). "Hard Training for Soft Skills." Training **38**(6): 56-59.
- Gardner, P. D. (2000). Are College Students Prepared To Work? They May Not Be as Ready as We Think! U.S. Michigan.
- Gedye, S., E. Fender, et al. (2004). "Students' Undergraduate Expectations and Post-Graduation Experiences of the Value of a Degree." Journal of Geography in Higher Education **28**(3): 381-396.
- Gibbs, P. T. (2000). "Isn't Higher Education Employability?" Journal of Vocational Education & Training: The Vocational Aspect of Education **52**(4): 559-571.
- Glover, D., S. Law, et al. (2002). "Graduateness and Employability: Student Perceptions of the Personal Outcomes of University Education." Research in Post-Compulsory Education **7**(3): 293-306.
- Harvey, L. (2001). "Defining and Measuring Employability." Quality in Higher Education **7**(2): 97-109.

- Hayden, J. (2000). *The Health Education Specialist: A Study Guide for Professional Competence*, 4th edition. National Commission for Health Education Credentialing, Inc.: Allentown, PA.
- Hedges, L. E. and V. M. Axelrod (1995). *Assessing Learning*. U.S. Ohio.
- Heldrich, J. (2002). *One Stop Innovations: Leading Change Under the WIA One-Stop System*.
- Hernandez, A., M. Parker, et al. (2003). "Helping Students Enter the Health Professions in Arizona." *Winds of Change* **18**(1): 68-69.
- Hillage, J., and E. Pollard (1998). "Employability: developing a framework for policy analysis" London Department for Education and Employment.
- Hilliard, A. (1998). "Discussion of the Report of the Committee on Nursing Education." *The American Journal of Nursing* **23**(3): 197-201.
- Hofstrand, R. (1996). *Advisory Councils for Education: A Handbook*.
- Holmes, A. and S. Miller (2000). "A Case for Advanced Skills and Employability in Higher Education." *Journal of Vocational Education & Training: The Vocational Aspect of Education* **52**(4): 653-664.
- Holmes, L. (2001). "Reconsidering Graduate Employability: The "Graduate Identity" Approach." *Quality in Higher Education* **7**(2): 111-119.
- Hoppes, S. and S. Chesbro (2003). "Elements of Instruction in Allied Health: Do Faculty and Students Value the Same Things?" *Journal of Allied Health* **32**(3): 167-172.
- Houghton, T. and T. Proscio (2001). *Hard Work on Soft Skills: Creating a "Culture of Work" in Workforce Development*. U.S. Pennsylvania.
- Hyslop-Margison, E. J. (2000). "The Employability Skills Discourse: A Conceptual Analysis of the Career and Personal Planning Curriculum." *Journal of Educational Thought/Revue de la Pensee Educative* **34**(1): 59-72.
- Hyslop-Margison, E. J. (2001). *Liberalizing Career Education: An Aristotelean Approach to Occupational Study*. U.S. Indiana.
- Isocrates. (1929). *Isocrates II*. G Norlin (Trans.). T.E. Page, E. Capps, and W.H.D. Rose (Eds). New York: G.P. Putnam and Sons.
- Johnson, A. B., D. McDonald, et al. (2002). *The Lansing Area Manufacturing Partnership: A School-to-Success Story*. U.S. District of Columbia.
- Jones, E. (2002). "Beyond Supply and Demand: Assessing the Ph.D. Job Market." *Occupational Outlook Quarterly* **46**(4): 22-33.
- Kannankutty, N. (2005). "College Graduates in the US Workforce: A Profile." National Science Foundation, Division of Science Resources Statistics, Arlington, VA (NSF 06-304).
- Kelkar, M. and S. R. Paranto (1999). "Employer Satisfaction with Job Skills of Business College Graduates and Its Impact on Hiring Behavior." *Journal of Marketing for Higher Education* **9**(3): 73-89.
- Lees, D. (2002) "Graduate Employability: Literature Review." Available at <http://www.Itsn.ac.uk/genericcentre/index.asp?id=18285> **Volume 2**, DOI:
- Leonard, D. (2000). "Transforming Doctoral Studies: Competencies and Artistry." *Higher Education in Europe* **25**(2): 181-92.
- Leroux, J. A. and S. Lafleur (1995). *Employability Skills: The Demands of the Workplace*. *Vocational Aspect of Education*: 189-196.

- Likert, R. (1932). "A Technique for the Measurement of Attitudes." Archives of Psychology **140**: 1-55.
- Little, B. (2001). "Reading between the Lines of Graduate Employment." Quality in Higher Education **7**(2): 121-129.
- Little, B. (2003) "International Perspectives on Employability." **Volume 16**, DOI:
- Luecking, R. G. and E. S. Fabian (2000). "Paid Internships and Employment Success for Youth in Transition." Career Development for Exceptional Individuals **23**(2): 205-221.
- MacAllum, K. and I. Charner (2000). Beyond the Success of the Students: Effects of Participation on School-to-Career Partners. U.S. District of Columbia.
- MacAllum, K., S. H. Taylor, et al. (1999). Manufacturing Educational Change: Impact Evaluation of the Lansing Area Manufacturing Partnership Pilot Program. Executive Summary. U.S. District of Columbia.
- Marin, A. (1982). The Reward for Risk in the Labor Market: Evidence From the United Kingdom and a Reconciliation with Other Studies. Journal of Political Economy **90** (4): 827-853.
- McLaughlin, M. (1995). Employability Skills Profile: What Are Employers Looking For? U.S. North Carolina.
- Mills, M. E., C. F. Waltz, et al. (2000). "Emphasis Courses: Preparing Baccalaureate Students for Transition to the Workforce." Journal of Professional Nursing **16**(5): 300-306.
- Morley, L. (2001). "Producing New Workers: Quality, Equality and Employability in Higher Education." Quality in Higher Education **7**(2): 131-138.
- Murray, R. (1994) The Lexicon of Labor: More Than 500 Key Terms, Biographical Sketches, and Historical Insights Concerning Labor in America. Nagle, R. A. and J. Bohovich (2002). "A Report on NACE's 2002 Graduating Student & Alumni Survey--How College Job Seekers View Their Prospects." Journal of Career Planning & Employment **62**(3): 28-34.
- National Commission for Health Education Credentialing, Inc. (2002). A Competency-based Framework for Professional Development of Certified Health Education Specialists. National Commission for Health Education Credentialing, Inc.: Allentown, PA.
- National Commission for Health Education Credentialing, Inc. (2002). Eligibility for the CHES Exam. Retrieved September 28, 2007, from the World Wide Web: <http://www.nchec.org/becomeches/eligibility.asp>.
- O'Brien, E. M. and S. J. Hart (1999). "Action Learning: The Link between Academia and Industry?" Educational Research **41**(1): 77-89.
- Overtom, C. (2000). Employability Skills: An Update. ERIC Digest No. 220. U.S. Ohio.
- Pickles, T. A. (2000). Encouraging Students To Acquire Key Skills and Manage Their Own Learning. United Kingdom England.
- Paranto, S. and Mayuresh K. (1999). "Employer Satisfaction with Job Skills of Business College Graduates and Its Impact on Hiring Behavior." Journal of Marketing for Higher Education **9** (3): 73-89.
- Pool, Lorraine Dacre and Sewell, Peter (2007). "The Key to Employability: Developing a Practical Model of Graduate Employability." Education and Training. **49** (4): 277-289.

- Rabinowitz, S. N. (1995). Beyond Testing: A Vision for an Ideal School-to-Work Assessment System. Vocational Education Journal. **70**: 27.
- Rainsbury, E., D. Hodges, et al. (2002). "Ranking Workplace Competencies: Student and Graduate Perceptions." Asia-Pacific Journal of Cooperative Education **3**(2): 9-18.
- Sagen, H. B., J. W. Dallam, et al. (2000). "Effects of Career Preparation Experiences on the Initial Employment Success of College Graduates." Research in Higher Education **41**(6): 753-767.
- SAS software. Copyright, SAS Institute Inc. SAS and all other SAS Institute Inc. product or service names are registered trademarks or trademarks of SAS Institute Inc., Cary, NC, USA.
- Saterfiel, T. H. and J. R. McLarty (1995). Assessing Employability Skills. ERIC Digest. U.S. North Carolina.
- Schwager, M. T. (2001). Building Foundations for Academic Success in School-to-Career Systems. U.S. California.
- Shivpuri, S. & Kim, B. (2004). Do employers and colleges see eye-to-eye?: College student development and assessment. NACE Journal, 65, 37-44.
- Sleap, M. and H. Reed (2006). "Views of Sport Science Graduates Regarding Work Skills Developed at University." Teaching in Higher Education **11**(1): 47-61.
- Smetherham, C. (2006). "Firsts among Equals? Evidence on the Contemporary Relationship between Educational Credentials and the Occupational Structure." Journal of Education and Work **19**(1): 29-45.
- Smith, E. & Comyn, P. (2004). "The Development of Employability Skills in Novice Workers Through Employment." Generic Skills in vocation Education Research 95-100.
- Smith, R. & Bettes, M. (2000). "Learning as Partners: Realizing the Potential of Work-based Learning." Journal of Vocational Education and Training **52**(4): 589-604.
- SPSS for Windows, Rel. 11.0.1. 2001. Chicago: SPSS Inc.
- Stewart, J. and V. Knowles (2000). "Graduate Recruitment and Selection: Implications for HE, Graduates and Small Business Recruiters." Career Development International **5**(2): 65-80.
- Szul, L. F. and W. A. Moore (1999). "Preparing Career-Ready Students: A Process for Curriculum Revision." Business Education Forum **54**(1): 42-44.
- Taylor, A. (1998). "Employability Skills: From Corporate "Wish List" to Government Policy." Journal of Curriculum Studies **30**(2): 143-164.
- Taylor, A. (2005). "What Employers Look For: The Skills Debate and the Fit with Youth Perceptions." Journal of Education and Work **18**(2): 201-218.
- Teichler, Ulrich (1999). "The institutional basis of higher education research" [electronic resource] : experiences and perspectives / edited by Stefanie Schwarz and Ulrich Teichler (Centre for Research on Higher Education and Work, University of Kassel, Germany). Publication info.Dordrecht [Netherlands] ; Boston : Kluwer Academic Publishers, c2000.
- Thiers, N. E. (1995). Successful Strategies: Building a School-to-Careers System. U.S. Virginia.
- Toepfer, C. F., Jr. (2002). Paradigms for Future Guidance Programs: A Longitudinal Approach to Preparing Youth for Employability. U.S. New York.
- Van Horn, C. E. (1995). Enhancing the Connection between Higher Education and the Workplace: A Survey of Employers. U.S. Colorado.

- West, J. (2000). "Higher Education and Employment: Opportunities and Limitations in the Formation of Skills in a Mass Higher Education System." Journal of Vocational Education & Training: The Vocational Aspect of Education **52**(4): 573-588.
- Wilhelm, W. J., J. Logan, et al. (2002). Meeting the Demand: Teaching "Soft" Skills. U.S. Arkansas.
- Wiseman, A. W. and N. Alromi (2002). Education-Work Linkage and Policy: A Cross-National Analysis of Contextual Influences on School to Work Transition. U.S. Oklahoma.
- Wonacott, M. E. (2002). The Impact of Work-Based Learning on Students. ERIC Digest. U.S. Ohio.
- Wright, W. A. (2001). "The Dalhousie Career Portfolio Programme: A Multi-Faceted Approach to Transition to Work." Quality in Higher Education **7**(2): 149-159.
- York, M. and P. T. Knight (2006). "Curricula for Economic and Social Gain." Higher Education: The International Journal of Higher Education and Educational Planning **51**(4): 565-588.
- Yorke, M. (2004). "Employability in the Undergraduate Curriculum: Some Student Perspectives." European Journal of Education **39**(4): 409-427.
- Zinser, R. (2003). "Developing Career and Employability Skills: A US Case Study." Education + Training **45**(7): 402-410.

APPENDIX A: SCANS REPORT

The Secretary's Commission on Achieving Necessary Skills (SCANS), U.S. Department of Labor. *What Work Requires of Schools: A SCANS Report for America 2000.*

The report identifies five competencies:

1. **Resources:** *Identifies, organizes, plans, and allocates resources.*

A. Time: Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.

B. Money: Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives.

C. Material and Facilities: Acquires, stores, allocates, and uses materials or space efficiently.

D. Human Resources: Assesses skills and distributes work accordingly, evaluates performance and provides feedback.

2. **Interpersonal:** *Works with others.*

A. Participates as a Member of a Team: Contributes to group effort.

B. Teaches Others New Skills.

C. Serves Clients/Customers: Works to satisfy customers' expectations.

D. Exercises Leadership: Communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies.

E. Negotiates: Works toward agreements involving exchange of resources, resolves divergent interests.

F. Works with Diversity: Works well with men and women from diverse backgrounds.

3. **Information:** *Acquires and uses information.*

A. Acquires and Evaluates Information.

B. Organizes and Maintains Information.

C. Interprets and Communicates Information.

D. Uses Computers to Process Information.

4. **Systems:** *Understands complex inter-relationships.*

A. Understands Systems: Knows how social, organizational, and technological systems work and operates effectively with them.

B. Monitors and Corrects Performance: Distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance and corrects malfunctions.

C. Improves or Designs Systems: Suggests modifications to existing systems and develops new or alternative systems to improve performance.

5. **Technology:** Works with a variety of technologies.

A. Selects Technology: Chooses procedures, tools or equipment including computers and related technologies.

B. Applies Technology to Task: Understands overall intent and proper procedures for setup and operation of equipment.

C. Maintains and Troubleshoots Equipment: Prevents, identifies, or solves problems with equipment, including computers and other technologies.

APPENDIX B: CHES COMPETENCIES AND SUB-COMPETENCIES

Area I: Assess Individual and Community Needs for Health Education

Competency A: Access existing health-related data

Sub-Competencies:

1. Identify diverse health-related databases
2. Use computerized sources of health-related information
3. Determine the compatibility of data from different data sources
4. Select valid sources of information about health needs and interests

Competency B: Collect health-related data

Sub-Competencies:

1. Use appropriate data-gathering instruments
2. Apply survey techniques to acquire health data
3. Conduct health-related needs assessments
4. Implement appropriate measures to assess capacity for improving health status

Competency C: Distinguish between behaviors that foster and hinder well being

Sub-Competencies:

1. Identify diverse factors that influence health behaviors
2. Identify behaviors that tend to promote or compromise health

Competency D: Determine factors that influence learning

This competency is not addressed in the study guide because the sub-competencies are related to an advanced level of practice.

Competency E: Identify factors that foster or hinder the process of health education

Sub-Competencies:

1. Determine the extent of available health education services
2. Identify gaps and overlaps in the provision of collaborative health services

Competency F: Infer needs for health education from obtained data

Sub-Competencies:

1. Analyze needs assessment data

Area II: Plan Health Education Strategies, Interventions and Programs

Competency A: Involve people and organizations in program planning

Sub-Competencies:

1. Identify populations for health education programs
2. Elicit input from those who will affect or be affected by the program
3. Obtain commitments from individuals who will be involved

4. Develop plans for promoting collaborative efforts among health agencies and organizations with mutual interests

Competency B: Incorporate data analysis and principles of community organization

Sub-Competencies:

1. Use research results when planning programs
2. Apply principles of community organization when planning programs
3. Suggest approaches for integrating health education within existing health programs
4. Communicate need for the program to those who will be involved

Competency C: Formulate appropriate and measurable program objectives

Sub-Competencies:

1. Design developmentally appropriate interventions

Competency D: Develop a logical scope and sequence plan for health education practice

Sub-Competencies:

1. Determine the range of health information necessary for a given program of instruction
2. Select references relevant to health education issues or programs

Competency E: Design strategies, interventions and programs consistent with specified objectives

This competency is not addressed in the study guide because the sub-competencies are related to an advanced level of practice.

Competency F: Select appropriate strategies to meet objectives

Sub-Competencies:

1. Analyze technologies, methods and media for their acceptability to diverse groups
2. Match health education services to proposed program activities

Competency G: Assess factors that affect implementation

Sub-Competencies:

1. Determine the availability of information and resources needed to implement health education programs for a given audience
2. Identify barriers to the implementation of health education programs

Area III: Implement Health Education Strategies, Interventions and Programs

Competency A: Initiate a plan of action

Sub-Competencies:

1. Use community organization principles to facilitate change conducive to health

2. Pretest learners to determine baseline data relative to proposed program objectives
3. Deliver educational technology effectively
4. Facilitate groups

Competency B: Demonstrate a variety of skills in delivering strategies, interventions and programs

Sub-Competencies:

1. Use instructional technology effectively
2. Apply implementation strategies

Competency C: Use a variety of methods to implement strategies, interventions and programs

Sub-Competencies:

1. Use the Code of Ethics in professional practice
2. Apply theoretical and conceptual models from health education and related disciplines to improve program delivery
3. Demonstrate skills needed to develop capacity for improving health status
4. Incorporate demographically and culturally sensitive techniques when promoting programs
5. Implement intervention strategies to facilitate health-related change

Competency D: Conduct training programs

This competency is not addressed in the study guide because the sub-competencies are related to an advanced level of practice.

Area IV: Conduct Evaluation and Research Related to Health Education

Competency A: Develop plans for evaluation and research

Sub-Competencies:

1. Synthesize information presented in the literature
2. Evaluate research designs, methods and findings presented in the literature

Competency B: Review research and evaluation procedures

Sub-Competencies:

1. Evaluate data-gathering instruments and processes
2. Develop methods to evaluate factors that influence shifts in health status

Competency C: Design data collection instruments

Sub-Competencies:

1. Develop valid and reliable evaluation instruments
2. Develop appropriate data-gathering instruments

Competency D: Carry out evaluation and research plans

Sub-Competencies:

1. Use appropriate research methods and designs in health education practice
2. Use data collection methods appropriate for measuring stated objectives
3. Implement appropriate qualitative and quantitative evaluation techniques
4. Implement methods to evaluate factors that influence shifts in health status

Competency E: Interpret results from evaluation and research

Sub-Competencies:

1. Analyze evaluation data
2. Analyze research data
3. Compare evaluation results to other findings
4. Report effectiveness of programs in achieving proposed objectives

Competency F: Infer implications from findings for future health-related activities

This competency is not addressed in the study guide because the sub-competencies are related to an advanced level of practice.

Area V: Administer Health Education Strategies, Interventions and Programs

Competency A: Exercise organizational leadership

Sub-Competencies:

1. Conduct strategic planning
2. Analyze the organization's culture in relationship to program goals
3. Promote cooperation and feedback among personnel related to the program

Competency B: Secure fiscal resources

This competency is not addressed in the study guide because the sub-competencies are related to an advanced level of practice.

Competency C: Manage human resources

Sub-Competencies:

1. Develop volunteer opportunities

Competency D: Obtain acceptance and support for programs

This competency is not addressed in the study guide because the sub-competencies are related to an advanced level of practice.

Area VI: Serve as a Health Education Resource Person

Competency A: Use health-related information resources

Sub-Competencies:

1. Match information needs with the appropriate retrieval systems

2. Select a data system commensurate with program needs
3. Determine the relevance of various computerized health information resources
4. Access health information resources
5. Employ electronic technology for retrieving references

Competency B: Respond to requests for health information

Sub-Competencies:

1. Identify information sources needed to satisfy a request
2. Refer requesters to valid sources of health information

Competency C: Select resource materials for dissemination

Sub-Competencies:

1. Evaluate applicability of resource materials for given audience
2. Apply various processes to acquire resource materials
3. Assemble educational material of value to the health of individuals and community groups

Competency D: Establish Consultative Relationships

Sub-Competencies:

1. Analyze parameters of effective consultative relationships
2. Analyze the role of the health educator as a liaison between program staff and outside groups and organizations
3. Act as a liaison among consumer groups, individuals and health care providers
4. Apply networking skills to develop and maintain consultative relationships
5. Facilitate collaborative training efforts among health agencies and organizations

Area VII: Communicate and Advocate for Health and Health Education

Competency A: Analyze and respond to current and future needs in health education

Sub-Competencies:

1. Analyze factors (e.g., social, cultural, demographic, political) that influence decision-makers

Competency B: Apply a variety of communication methods and techniques

Sub-Competencies:

1. Assess the appropriateness of language in health education messages
2. Compare different methods of distributing educational materials
3. Respond to public input regarding health education information
4. Use culturally sensitive communication methods and techniques
5. Use appropriate techniques for communicating health education information
6. Use oral, electronic and written techniques for communicating health education information

7. Demonstrate proficiency in communicating health information and health education needs

Competency C: Promote the health education profession individually and collectively

Sub-Competencies:

1. Develop a personal plan for professional development

Competency D: Influence health policy to promote health

Sub-Competencies:

1. Identify the significance and implications of health care providers' messages to consumers

APPENDIX C: SURVEY INSTRUMENT

Virginia Health Educator Survey

Section 1 Please rate the level of importance in your position of the skills/competencies listed below. Please respond between "1" and "5" indicating the level of importance at some point between LOW (1) and HIGH (5).

Competencies required in your specialized area of Health Promotion.

1 2 3 4 5

Experience in dealing with "real world" problems.

1 2 3 4 5

Technical skills (integrating a motor/ technical skill, such as the use of a computer, with other abilities.

1 2 3 4 5

Ability to adapt to rapidly changing technologies (computers, etc.).

1 2 3 4 5

Critical thinking skills (ability to evaluate decisions/ solutions).

1 2 3 4 5

Written communication skills.

1 2 3 4 5

Oral communication skills.

1 2 3 4 5

Listening skills.

1 2 3 4 5

Analytical skills (quantitative ability such as the ability to create, evaluate, and process data needed for programming needs and assessments).

1 2 3 4 5

Creative thinking skills (innovative, new ideas).

1 2 3 4 5

Leadership ability required in your job.

1 2 3 4 5

Interpersonal skills (ability to work with others).

1 2 3 4 5

Professional ethics (in accordance with formal or professional rules of right and wrong).

1 2 3 4 5

Professionalism (the conduct, aims or qualities that characterize a profession).

1 2 3 4 5

Section II Please indicate the degree to which you agree or disagree with the following statement. Circle a response between "1" and "5" indicating the extent to which you agree at some point between STRONGLY DISAGREE (1) and STRONGLY AGREE (5).

If given the opportunity, I would participate in building the course curriculum of Health Promotion programs in higher education.

1 2 3 4 5

If given the opportunity, I would participate in the evaluation of students in Health Promotion programs in higher education.

1 2 3 4 5

Please list your undergraduate degree/major and year.

Please list all other degree(s)/major(s) and year(s).

What is your current job title?

Are you CHES (Certified Health Education Specialists) certified? If so, what year?

What is something that you would like to see added into course

curriculum of Health Promotion students?

What advice would you give to other Health Promotion students to help them achieve success in their career?

Would you be willing to participate in a follow up interview?

Yes

No

APPENDIX D: ORIGINAL SURVEY REQUEST LETTER

Dear Health Educator,

I am a Ph.D. student conducting research for my dissertation, and your help would be greatly appreciated. You have been chosen as a survey respondent because of your position as Health Educator in a higher education institution in the state of Virginia.

The objective of this research is to examine the perceptions of college health educators regarding the importance of core skills such as dealing with real world situations, integrating technical skills such as the use of a computer, ability to adapt to rapidly changing technologies, ability to evaluate decisions and create solutions, written and oral communication skills, listening skills, analytical skills, creative thinking skills, leadership ability, interpersonal skills, professional ethics, and professionalism.

All of your responses will be anonymous and all records will be kept confidential. The responses will be used strictly for purposes of this research project. Taking the survey will take approximately 5-10 minutes of your time. Completion of this survey indicates voluntary consent to participate in this study.

I appreciate your time and effort towards this study and we would kindly request you to use the following link to complete the survey by May , 2007.

(LINK)

If you prefer to participate by completing a paper survey, I would be happy to provide one for you upon request.

Thank you so much for your participation. Should you like a copy of the results or the dissertation, I would be happy to provide it upon request. In addition, if you have any questions, comments or concerns please feel free to contact me via e-mail at daglenn@vt.edu

Danylle Kunkel
Ph.D. student
Virginia Tech

APPENDIX E: HARD COPY SURVEY REQUEST LETTER

July 26, 2007

Dear Health Educator,

Recently you received several e-mails (original request and follow-up e-mails) requesting your participation in a survey regarding preparation derived from academic degree in terms of transferability and satisfaction in your current job position. If you have already completed the survey, I appreciate your time and effort towards this study. Please use the enclosed Starbucks Gift Card to enjoy a cup of coffee and pastry as a small token of my gratitude.

I understand that there are certain problematic issues that arise when dealing with computerized surveys. If you were unable to complete the previous survey, I am inviting you to participate via the hard copy form enclosed. Please take a few minutes to enjoy a cup of coffee while completing the enclosed survey. Once complete, please return the survey in the enclosed postage paid envelope no later than August 15th.

Once again, your responses are anonymous, all records will be kept confidential, and only aggregate data will be reported. The responses will be used strictly for purposes of this research project. Completing the survey will take approximately 5 minutes of your time. Completion of this survey indicates voluntary consent to participate in this study. Should you wish to complete the survey on line, it is still available via the following link:

<https://survey.vt.edu/survey/entry.jsp?id=1183398573948>

Thank you so much for your participation. Should you like a copy of the results, I would be happy to provide it upon request. In addition, if you have any questions, comments or concerns please feel free to contact me via e-mail at daglenn@vt.edu

Danylle Kunkel
Ph.D. candidate
Virginia Tech
daglenn@vt.edu

APPENDIX F: IRB APPROVAL

APPENDIX G: CURRICULUM VITA

Curriculum Vitae

Danylle R. Kunkel
515 Gold Leaf Drive, Christiansburg, VA 24073
540-382-1334 • daglenn@vt.edu

Education

- 2001- Ph.D. **Virginia Polytechnic Institute and State University**, Blacksburg, VA.
Major: Curriculum and Instruction. (Expected graduation December 2007)
Dissertation: *Profile of Health Educators in Virginia Institutions of Higher Education: The Value Attached to Work-related Competencies*
Chair: Kerry Redican, PhD
- 1998 B.A. **University of Central Florida**, Orlando, FL.
Major: Liberal Studies (Honors program)

Areas of Teaching Interest

- Leadership Studies

Areas of Research Interest

- Leadership Coaching
- Transferability of college curriculum to the workforce
- Preparing college students for careers
- Preparing women for careers

Professional Experience

- 2007-Present **Virginia Polytechnic Institute and State University**, Blacksburg, VA
Instructor
- Create course curriculum for undergraduate leadership courses.
 - Assist director in development of leadership program.
 - Develop outside corporate partnerships.
 - Teach undergraduate leadership courses.
 - Plan and execute yearly conference.
- 2007-Present **Vadova Consulting**
CEO/Founder

- Leadership Coaching.
- Executive Coaching.
- Management Coaching.
- Perform and analyze assessments.
- Plan and facilitate leadership workshops.

2002-2006 Red Bull North America, Richmond, VA
Team Manager

- Hire and manage education team.
- Conduct trainings and workshops on various leadership topics.
- Develop and facilitate “Train the Trainers” program.
- Conduct initial and bi-weekly staff trainings.
- Create annual educational seminars.
- Create templates and programming for the Mobile Energy Team position.
- Create job description and handbook for Mobile Energy Team.
- Yearly and quarterly planning.
- Work cross functionally with distributor personnel.
- Present educational information to colleges, businesses, and private groups on the product and job placement.
- Collaborate with leadership coaches such as Adler and Harding (Improv Asylum) to further corporate development.

2000-2002 Wolf Gangs Gym, Richmond, VA
Assistant Manager

- Assist general manager in daily operations.
- Hire, manage and train employees including desk, childcare, massage therapist and personal trainers.
- Communicate with members relating to gym business.
- Plan, organize, and promote a minimum of two large events a year including bench and power competitions, strong man competition and body building competitions.
- Oversee memberships and assist with annual budget.

2000-2001 Virginia Commonwealth University, Richmond, VA
Assistant Strength Coach

- Develop and oversee the lifting routine of soccer, volleyball, lacrosse and track and field teams.
- Assist in planning and implementing lifting routines for basketball team.
- Teach undergraduate weight training

1999-2000 On-Premise Management, Atlanta, GA
On-Premise Marketing

- Increase visibility, acceptability and profitability of five brands.
- Coordinate spectator events that promote marketing agenda.
- Hire and direct temporary staff.
- Work along side of distributor to build brands.

- 1999-2000 Inner City Games, Atlanta, GA
Field Coordinator
- Assist in planning and organizing inner city games.
 - Work with participants to ensure proper placement and satisfaction.
 - Work with staff and coaches to plan for the year's events and curriculum.
- 1997-1999 Center for Health and Wellness, Orlando, FL
Exercise Physiologist
- Conduct Fitness assessments on exercise participants.
 - Create exercise routines for individuals based on fitness level.
 - Work with cardiac patients on post rehab programs.
 - Plan and organize community wellness events bi-annually.

Teaching Experience

- 2007-Present Virginia Polytechnic Institute and State University, Blacksburg, VA
LDRS 1015 and 1016 Exploring Citizen Leadership
Leadership Theory is a two semester undergraduate course for students excepted into the Residential Leadership Community. The course explores traditional and contemporary leadership theories and competencies by comparing cultural contexts of leadership.
- 2004-2005 Virginia Polytechnic Institute and State University, Blacksburg, VA
Weight Training
Weight Training is an undergraduate course for students in Education and Human, Nutrition, and Exercise. The course focused on instructional techniques for areas of terminology, program development, and biomechanics in regards to weight training.
- 2003-2006 Guest Lectures, Virginia
Delivered lectures in the business schools at Virginia Tech, Radford University, Shenandoah University, James Madison University, Eastern Mennonite, and University of Virginia with the focused topic of increasing marketability in the workforce.
- 2000-2001 Virginia Commonwealth University, Richmond, VA
Weight Training for College Athletes
Weight Training for College Athletes is an undergraduate course focused on teaching programming and biomechanics in regards to athletic performance.
- 1998-1999 University of Central Florida, Orlando, FL
Medical Self-Assessment

Medical Self-Assessment is an undergraduate course for education majors focusing on teaching techniques in areas of personal health. Topics included exercise, nutrition, sexually transmitted disease, drug and alcohol use, and cancer awareness.

Publications

Leiferman, J., Ollendick, T., Kunkel, D., & Christie, C., (2005). Mothers' mental distress and parenting practices with infants and toddlers. *Archives of Women's Mental Health*, 8(4), 243-247.

Presentations

Kunkel, DR. Poole, KP. & Leiferman, JA. (2003, November). *Maternal mental distress and child rearing behaviors that impact child wellbeing*. Poster presented at the 131st Annual Meeting of the American Public Health Association, San Francisco, CA.

Professional Certifications

360 By Design
Executive Dimensions
Benchmarks
Prospector
Skillscope

Professional Affiliations

2007-current	International Coach Federation	(ICF)
2007-current	American Society for Training & Developing	(ASTD)
2007-current	American Society for Training & Developing Roanoke Chapter	(ASTD)
2007-current	American Psychological Association	(APA)
2007-current	American Educational Research Association	(AERA)

Professional Development

Kunkel, D and Trudeau, D (2007). MBTI Training. Workshop presented for Hillel of Virginia Tech, Blacksburg, VA. The focus of the workshops is to discover individual personality types, explore meanings and ascertain implications for team synergy.

- Kunkel, D. (2005). *Finding the right candidate*. Workshop presented for Red Bull North America, Santa Monica, CA. The focus of this series is to improve the techniques of the interviewer as well as introduce various methods of interviewing in order to ensure the candidate to be a good fit for the company persona.
- Kunkel, D. (2005). *Being the right candidate*. Workshop presented for Red Bull North America, Santa Monica, CA. The focus of this series is to provide college students with skills to be successful in their job search.
- Kunkel, D. (2005). *Building a plan*. Workshop presented for Red Bull North America, Santa Monica, CA. The focus of this series is to teach students the process and of building an effective and thorough yearly business plan.
- Kunkel, D. (2004). *Training the trainers*. Workshop presented for Red Bull North America, Santa Monica, CA. The focus of this series is to further develop the skills of other team managers throughout the United States. In addition, I created and presented workshops on conducting interviews and techniques for choosing the right job candidate.
- Kunkel, D. (2004). *The Language of Communication*. Workshop presented for Red Bull North America, Santa Monica, CA. The focus of this series is to provide various techniques for enhancing communication skills.
- Kunkel, D. (2003). *Team Building*. Workshop presented for Red Bull North America, Santa Monica, CA. The focus of this series is to provide theory and successful techniques in creating strong working relationships.

