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Student and Faculty Views of Important Elements of Teaching in Associate Level Allied Health Programs

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Student and Faculty Views of Important Elements of Teaching in Associate Level Allied Health Programs

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by

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ABSTRACT

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Important Elements of Teaching in Associate Level Allied Health Programs

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Teaching requires constant adapting, and need to continually reflect, and be ready to make changes when teaching elements may not prove effective. The purpose of this study was to examine faculty and student views of effective elements of teaching in an associate level allied health program. Surveys were collected from associate degree seeking allied health students and full-time faculty currently employed at a technical college in the northeastern region of the state of Georgia. The results showed a high confidence level with little to no difference in mean confidence levels between faculty and student responses on 15 Likert-scaled questions. Two open-ended questions showed little difference as well with faculty and students having similar responses when asked their preferred teaching/learning method. Results of this study will help to improve educational instruction for allied health programs.

DEDICATION

I would like to dedicate this thesis to my family, and friends. A special feeling of love and gratitude to my parents, Steve Burrell and Rita Moon whose words of encouragement and support helped me to preserve throughout my life. I could not have obtained this success without your influence and support. My brother Jesse who was there when I needed him and who is very special to me.

I also dedicate this dissertation to my friends and co-workers who have supported me throughout this process. I could not have done it without you all.

I dedicate this work and give a special thanks to my boyfriend Octavius Davis for always being there for me throughout this entire process. You consistently pushed me to be greater and have been my biggest cheerleader.

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CHAPTER 1

INTRODUCTION

A number of studies have examined effective teaching methods in postsecondary education. Some of this research has focused on learning styles and teaching perspectives (Loewen & Jelescu-Bodos, 2013; National Survey of Student Engagement, 2013) while others focused on elements of instruction, teaching techniques, qualities of effective teachers, and student and faculty perceptions (Hoppes & Chesbro, 2003; Singh, et al., 2013; Schaeffer, Epting, Zinn, Buskist, 2003; Mangold, 2007; Whitney, 2014). Since an instructor's teaching style can either positively or negatively affect student learning, it is not only important for instructors to be familiar with the content being taught, but also how students access, process, and learn that material. Along with the different learning styles of today's college student comes an increasingly diverse population of students. It has been well documented that the demographics of students pursuing higher education has seen changes related to ethnicity, race, and age in the past few decades (Whitney, 2014). Although the age gap between students and faculty may not be as wide as it has been, there are still generational differences that may influence the educational experience of both faculty and students.

Johanson (2012) asked, "How can both faculty and students work together to implement learning strategies that correct generational inclinations that will be impediments to professional practice, yet encourage those seen as strengths" (pp. 173-174)? Mangold (2007) examined the impact of generational influences on the baby-boomer nursing faculty-millennial learner dyad; Johanson (2012) explored teaching the millennial generation and consideration for nursing educators, while Henry and Gibson-Howell (2011) compared classroom expectations of millennial dental hygiene students to that of faculty. Mangold (2007), Henry and Gibson-Howell

(2011) and Johanson (2012) all stated the need for faculty to incorporate new strategies and approaches for more effective and rewarding educational experiences for faculty and students.

According to Armstrong, Tucker, and Massad (2009), "faculty aspire to develop innovative programs and creative education while seeking effective teaching strategies that capitalize on emerging technology and invoke student interest and involvement" (p. 79). Classroom instruction constantly changes with new pedagogy and emerging technology.

> There are any number of ways to promote student involvement in the classroom. Many faculty use various case analyses, simulations, group project reports, games and other approaches to encourage student participation and learning. Technology is also making its way into the classroom in different ways. Remote controls, otherwise known as student response systems or clickers, are just one example of new technologies that have recently infiltrated the classrooms. Video streaming classrooms, wikis, blogs and course delivery systems such as Blackboard are but a few of the technological tactics in play (Armstrong, et al., 2009, p. 80).

While "a number of studies have attempted to identify the characteristics of an effective teacher" (Singh, et al., 2013, p. 1), "the diversity of adult learners in postsecondary institutions calls for instructors to be more than just dispensers of knowledge and instead serve as learning facilitators" (Whitney, 2014, p. 459-460).

Statement of the Problem

The learning environment for students in allied health programs may be hampered by differences in faculty and student perceptions of effective teaching methods.

Purpose of the Study

The purpose of this study is to examine the faculty and student views of effective elements of teaching in associate level allied health programs.

Research Questions

The following questions guide this study:

1. What are the views of allied health students of effective elements of teaching?
2. What are the views of allied health faculty of effective elements of teaching?
3. What teaching methods do students find helpful to their learning experience?
4. What are the preferred teaching methods of allied health faculty?

Significance of the Study

Assessing expectations of both faculty and students may improve the educational experience of allied health students.

Delimitations

The study was delimited to faculty and students at one technical college in the Northeast region of the State of Georgia. To be included in the study, students had to be enrolled in an associate level allied health program between the dates of 07/24/2014 and 12/05/2014. The study is limited to didactic instruction. Clinical instruction is not included in the study.

Limitations

The limitations for this study include the fact that participants were limited to one technical college with results not generalized beyond that student population. Limitations also include honesty of participants and the fact that participants will not be chosen at random.

Terms:

Associate level allied health programs at Athens Technical College – These programs include associate of applied science in dental hygiene, associate of science in nursing, associate of applied science in radiography, associate of applied science in physical therapy assistant and associate of applied science in paramedic technology (Athens Technical College, 2014).

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

With the demographics of most college campuses becoming more varied, instructors must consider adapting their instruction to help students connect with what is being taught.

> Traditional postsecondary instruction consists of a classroom of students facing *chalk and talk* lecture while diligently taking notes, followed by a test at some point in the future. In this setting the instructor defines the what, how, and when learning takes place. This type of teacher-centered instruction has been the norm at postsecondary institutions for years, but some learners have difficulty in this type of learning atmosphere. In fact, according to Jacobs, lecturing has limited effectiveness in helping students retain information after the course is over; develop an ability to transfer knowledge to novel situations; develop skill in thinking or problem solving; and achieve affective outcomes, such as motivation for additional learning or a change in attitude (Whitney, 2014, p. 459)

Since allied health students must not simply memorize content, but retain it and apply it to the clinical setting and actual patients, it is important for instructors to approach their delivery of content in order to reach every student in the classroom.

Student and Faculty Demographics

In previous generations, most college students were 18-22 years old and faculty were likely to be almost twice that age. Today's picture looks a bit different.

> The U.S. Department of Education's National Center for Education (NCES) reported a record 19.7 million students expected to attend American colleges and universities in the fall of 2011, with an increase in the numbers of percentages of black and Hispanic

> students. The numbers of older learners in postsecondary education have increased also. The NCES reported that in recent years the percentage increase in the number of students age 25 and over has been larger than the percentage increase in the number of younger students and this pattern is expected to continue. NCES projects a 23% rise in enrollment for all students aged 25 and older by 2019… With adult learners older than 24 years of age comprising about 44% of U.S. postsecondary students, institutions of higher learning need to establish more ways of accommodating their needs (Whitney, 2014, 458-459).

"Studies have shown the average age of full-time faculty members to be 50" (Twombly & Townsend, 2008, p.13). To break that down even further, "the U.S. Department of Education (2005) determined that approximately 36% were younger than 44 whereas 32% were between the ages of 45-54 and 22% were between the ages of 55 to 64: only 8% were older than 65" (Twombly & Townsend, 2008, p. 13). In addition to the closing age gap between faculty and students in community colleges nationwide comes the potential for factors to influence successful outcomes (Mangold, 2007). Due to unique life experiences, educational experiences, and social events occurring within a generation, "commonalities in values, beliefs, attitudes, behaviors, and perceptions of the world" may occur as well as specific preferences in teaching and learning (Mangold, 2007, p. 21).

Community college educators realize that the allied health classrooms contain both the current traditional aged (millennial) students as well as older, adult learners who enter the programs with different learning styles and needs (Kimbrough-Walls, 2013, p. 27). The adult learner enters allied health programs at varying stages of life, as a result there are many outside influences that affect how the adult student learns.

> Many students go back to school years after their most recent educational experience. Adult learners typically have additional responsibilities along with school, such as families and full-time jobs. All of these responsibilities compete with college course expectations and requirements for the adult learners' time and attention (Whitney, 2014, p.459).

Along with these responsibilities, the adult learner also brings knowledge and experience to the classroom. While traditional teaching methods may not fully meet the needs of this new student population, faculty can enhance the learning experience for all generations represented by taking a collaborative approach that can reach every student and meet their individual mode of learning.

Collaborative Environment

According to the National Survey of Student Engagement (NSSE) (2013), "collaborative learning enhances student success by facilitating motivation, shared understanding of material, and support, among other benefits across disciplines and contexts." (p. 14)

> Collaborating with peers in solving problems or mastering difficult material deepens understanding and prepares students to deal with the messy unscripted problems they encounter during and after college. Working on group projects, asking others for help with difficult material or explaining it to others, and working through course material in preparation for exams all represent collaborative learning activities. (National Survey of Student Engagement, 2013, p. 40)

While collaborating with peers can prove helpful, it is not the only important interaction. Student-faculty interaction can also impact a student's college success. "Interactions with faculty can positively influence the cognitive growth, development and persistence of college students"

(NSSE, 2013, p. 42). Through their roles as teachers, advisors, and mentors, faculty can help students make connections between their studies and their future plans (NSSE, 2013).

Effective Teaching

According to Hande, Kamath, and D'Souza (2014), it is often portrayed in literature and academic settings that effective teaching is the cornerstone of the student learning environment" (p. 63); however, effective teaching can be hard to define. "The reality is that there is no single factor, nor consensus in literature, about what is, or what are the components of effective teaching" (Hande, et al., 2014, p. 63). It is hard to find a definitive definition simply because the criteria can differ for each instructional situation and each individual teacher. Hande, et al. (2014), suggests that "effective teaching involves progressively refining our courses based on reflection and feedback" (p. 65). Malik and Bashir (2015) agree that "reflection of characteristics of a teacher has significant impact on learning and development of students as well as enhancing teacher student relationships" (p. 670). "While educational research has identified many instructional strategies and behaviors which have come to be referred to as effective, it is not the case that each of these strategies and behaviors produce the same outcomes with all students in all teaching situation" (Hunt & Touzel, 2009, p. 3). Whitney (2014) suggests that "college students or adult learners are no different than children when it comes to their diverse learning styles. People of all ages have unique learning styles and are extremely varied in their interests, experience, personal circumstances, and goals" (p.459). Providing students different pathways to demonstrate what they have learned, and/or how they can apply it to the clinical setting in allied health can effectively promote creative and critical thinking along with synthesis of information and appropriate criteria for success (Santangelo & Tomlinson, 2009). Since teaching requires

constant adapting, instructors need to continually reflect on what they are doing effectively and be ready to make changes when efforts may not prove effective.

Student and Faculty Perceptions of Teaching

Faculty vary in the way they approach delivery of content in the classroom, just as students vary in the way they access, process, and retain material. Instead of faculty relying specifically on their own preferred teaching styles, they should collaborate with the students to understand how they learn and make modifications to reach each student represented.

> For years, educators have sought to determine instructional elements considered valuable by students. Becoming aware of important elements of teaching effectiveness can help allied health educators strengthen instruction and as a result, improve academic outcomes and increase students' satisfaction. Secondary gains of improved clinical performance and performance on competency examinations could be realized as well. Educators often enter the classroom with certain assumptions about the classroom and effective instruction. According to Brookfield, our assumptions confirm and shape our perceptions, and it is difficult to identify assumptions. He encouraged teachers to reflect critically by first looking at students' perspectives. A comparison of the expectations and priorities of students and teachers can allow faculty to reflect critically on any presuppositions held about elements of teaching effectiveness. Most allied health educators were clinicians before entering higher education. The transition from clinic to classroom is a difficult challenge for many and often does not allow for adequate preparation and understanding of pedagogical and andragogical teaching principles and practices. It is imperative that faculty members in allied health education become aware of their biases towards

components of teaching effectiveness compared with those of their students (Hoppes & Chesbro, 2003, p. 167).

Hoppes and Chesbro (2003) assessed faculty and students to find perceived value of various elements of effective teaching, and similarities and differences in allied health students and faculty (p. 167). The four items that appeared on both student and faculty lists were teacher's ability to relate course material to clinical situations, teacher's communication skills, preparation, organization, and knowledge of the subject (Hoppes & Chesbro, 2003, p. 167).

Using a similar approach surveying community college faculty and students regarding their perspectives on effective teaching, Schaeffer, et al. (2003) found that the top qualities or behaviors were: "(a) approachable, (b) creative and interesting, (c) encouraging and caring, (d) enthusiastic, (e) flexible and open-minded, (f) knowledgeable, (g) realistic expectations and fair, and (h) respectful" (p. 133). These results closely paralleled those of Buskist, Sikorski, Buckley, and Saville (2002) suggesting that faculty and students view effective teaching similarly. For a long time the effectiveness of the teacher always has been measured on the basis of student outcomes or students' perceptions. Now the trend has changed to include the teacher's self-evaluation or evaluation by peers in overall assessments. As teachers have a significant role in students learning, it is pertinent to identify the factors which make them effective (Singh, et al., 2013, p. 1).

Since allied health education is constantly changing and developing, and most medical teachers have "no formal training as a teacher" (Singh et al., 2013, p. 1), knowledge of effective teaching methods and qualities could prove beneficial for the allied health faculty. "Although many authors have published their personal opinions of characteristics of an effective teacher, fewer studies have used feedback from teachers themselves as compared to students' ratings to

define an effective teacher" (Singh et al., 2013, p. 2). Singh et al. (2013) completed a cross-sectional study of the "characteristics of effective teachers from their own perspective across medicine and dentistry disciplines" (Singh et al., 2013, p. 1). The characteristics identified as effective by responding faculty members were knowledge of subject, enthusiasm/passion to teach, and communication skills (Singh et al., 2013).

> Although it may not be desirable for faculty to think more like students or vice versa, understanding of each other's views can be beneficial for both. In clinical practice, students work collaboratively with patients, families, team members, and administrators. The classroom can be an appropriate place to model collaborative professional relationships, and this can be accomplished through regular conversations between faculty and students about how instruction and professional development are proceeding. Through such conversations, students can learn why faculty believe that intellectual challenge is important in allied health education and how that influences instruction. At the same time, faculty can learn better ways to use discussion and questioning, for example, in the classroom to achieve instructional objectives (Hoppes & Chesbro, 2003, p. 172).

Characteristics of Clinical Instructors

"Clinical instruction is a set of planned experiences designed to help students acquire skills attitudes, and knowledge by participating in the work setting. Although the acquisition of skills is typically what comes to mind when the term clinical instruction used, it involves more than just teaching the technical aspects of motor skills. In addition, clinical instructors teach attitudes by role modeling as well as help students relate classroom teaching to clinical practice" (Steves, 2005, p.205). Because clinical instruction is just as important as didactic instruction in

allied health programs, there is a need to identify characteristics and qualities that contribute to successful clinical students. In literature different attributes, characteristics, and qualities have been identified as effective for clinical instructors. Ingrassia (2011) stated that the "three characteristics identified most often in the literature were that the clinical instructors possess sufficient knowledge and skills, be approachable and accessible and allow for mutual respect" (p.411). Steves (2005) suggested that ""effective instructors give specific and constructive advice about performance. They are knowledgeable about what students need to know and criteria for acceptable performance" (p. 205). It is the hope of all allied health instructors that students can take all clinical and didactic components use them to critically think and then apply them to patient care. For this to happen, it is important to define what effective teaching approaches look like through the eyes of both students and faculty.

Theories of Learning and Teaching Styles

While it is not hard to find literature on effective teaching methods and learning and teaching styles, it can prove challenging to find scientific support for these learning theories. According to Loewen and Jelescu-Bodos (2013), "learning styles are commonly understood to be characteristic cognitive, affective, and psychological behaviors that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment" (p. 1). "There is significant interplay and overlap among the three domains, as reflected in the cognitive basis of psychomotor skill development, but each of the domains is somewhat unique, suggesting the need for different approaches to teaching" (O'Connor, 2006, p. 84). Faculty who have knowledge of students' learning styles can not only help the learner learn, but also help the instructor tailor instruction to better suit the individual student as well as the class as a whole. Along with learning styles,

> teaching styles also vary, and the relationship between teaching and learning is complex. When there is a misalignment between learning and teaching styles, learning may be undermined and manifest as poor student performance, low student attendance, discouragement, or boredom. This may negatively affect educators' performance because of a sense of alienation or a negative attitude toward students and education. There is no simple recipe for aligning teaching and learning styles, and educators should not attempt to teach exclusively to students' preferences. Efforts by instructors to balance a variety of teaching styles that align well with their students' learning styles can increase student comfort and willingness to learn (Loewen & Jelescu-Bodos, 2013, p.1).

Loewen and Jelescu-Bodos (2013) studied pharmacy residents and faculty preceptors in an attempt to characterize and compare learning styles between the two groups, and identify teaching perspectives of faculty preceptors. The most common dominant learning style among both faculty and students was assimilator (organized, detail-oriented, enjoys creating theories/models, requires structure and rehearsal time, hard on themselves) followed by converger (practical problem-solver and decision-maker, prefers technical vs social aspects, less concerned with details and others 'feelings than with success (Loewen & Jelescu-Bodos, 2013, p. 4). Based on this information, residency programs could implement more active learning styles and encourage interaction with patients and other caregivers. Since "learning in health care involves the ability to transfer knowledge from didactic courses to pre-clinical, laboratory or clinical settings for optimum patient care" (Stegeman & Zydney, 2010, p. 131), it is not only important to study how students learn, but also to find modes of learning that prove beneficial for students.

In comparison, Riener and Willingham (2010), suggested that assessment of student interest can be a useful tool for deciding how to approach the material in a given class (p.35). They also argued that "students differ in their abilities, interest, and background knowledge, but not their learning styles" (Riener & Willingham, 2010, p.35). Willingham, Hughes and Dobolyi (2015) suggested that "educators' time and energy are better spent on other theories that might aid instruction" (p. 266) other than learning style theories. They stated that while the belief in learning style theories is widespread, most evidence does not support any of the learning style theories. Along with Riener and Willingham (2010), and Willingham, Hughes and Dobolyi (2015), Royal and Stockdale (2015) argued that "only a handful of published studies actually possessed an appropriate research design to evaluate learning styles objectively, and the studies that used an appropriate research design found evidence that contraindicated the learning-styles hypothesis" (Royal & Stockdale, 2015, p. 132).

> The notion that every learner has a particular learning style has been ingrained into the minds of most medical educators. This concept is based on the idea that people process information differently and suggests that learning is more likely to occur when instruction is tailored to an individual learning style (Royal and Stockdale, 2015, p. 132).

Allied health education strives to produce a well-rounded student equipped with knowledge and skills to think critically, apply learned knowledge to patients, and at the end of the day provide excellent patient care. While there is evidence both supporting and appealing learning theories, teachers are still challenged to modify the classroom environment in some way to benefit all students effectively.

Summary

As the research suggests that students and faculty may not be that far apart in their perceptions of effective teaching strategies, allied health education programs, which require not only didactic but clinical components, could benefit from data regarding their own student and faculty perceptions of effective teaching.

CHAPTER 3

METHODOLOGY

Purpose

The purpose of this study was to examine the faculty and student views of effective elements of teaching in associate level allied health programs.

Research Questions

The following questions guide this research:

1. What are the views of allied health students of effective elements of teaching?
2. What are the views of allied health faculty of effective elements of teaching?
3. What teaching methods do students find helpful to their learning experience?
4. What are the preferred teaching methods of allied health faculty?

Population

The population for this study consisted of associate degree seeking allied health students and full-time faculty currently employed at a technical college in the northeastern region of the state of Georgia.

Informed Consent Consideration

According to Cottrell and McKenzie (2011) it is not uncommon in health education research to obtain consent without completing all three items in the informed consent process including (1) the researcher discussing the research study with the research participants, (2) research participants having an opportunity to ask questions about the study, and (3) the participants signing a written informed consent document. (p. 107)

In this study, participants were provided relevant information and allowed to ask questions about the purpose of the study, any foreseeable risks, how anonymity will be

maintained, and the ability to opt-out of participation at any time. However, the participants will not sign a written informed consent document; instead, their consent to participate will become implied by their decision to complete the survey either in person, or via the link to the online survey. "As indicated in these statements, this type of consent is referred to as implied consent and is acceptable in place of an actual consent form. That is, if after being informed about the study, the participants complete the research instrument, it is assumed that they consent" (Cottrell & McKenzie, 2011, p. 109).

Research Design

The data for this study was collected using a cross-sectional technique. According to Cottrell and McKenzie (2011), "cross-sectional studies collect data at one specific point in time. They can be used to determine the current attitudes, opinions, beliefs, values, behaviors, or characteristics of a given population" (p. 196). The measurement tool was obtained from, modified, and used with the permission of Steve Hoppes, Ph.D. OTR/L (See Appendix A 03/27/2015). Hoppes and Chesbro (2003) developed the survey instrument based on the research of Feldman (1988) and had the questionnaire reviewed for content and clarity by five faculty members in allied health programs.

> The internet-based survey was created that asked participants to rank the five most important items in teaching effectiveness from a list of 15. The survey was developed using items identified as important elements in teaching effectiveness in a meta-analysis by Feldman (Hoppes & Chesbro, 2003, p. 168).

Hoppes and Chesbro assessed all items and discarded ones that consistently received a low ranking by faculty and students. Fourteen elements were generated from the Feldman analysis and one item was developed specifically to assess the clinical component of allied health

education. Hoppes and Chesbro (2003) then asked faculty and students to rank the elements of teaching in allied health classes in order of importance. While the survey instrument developed by Hoppes and Chesbro (2003) allowed participants to prioritize their choices, and allowed for comparison of participants' top five choices, it did not provide a level of importance for each individual element of teaching effectiveness. For that reason, I modified the survey to provide more information on the importance of each element in the 15 item list. Instead of asking participants to rank the elements in order of importance, they will now be asked to indicate how much they agree or disagree that each element is important for an effective learning environment. Also, one open ended question was added to assess faculty and students' preferred teaching/learning methods.

Data Collection Procedures

With approval of the participating college (Appendix B), I personally delivered an invitation to participate (Appendix C) to the program directors of the dental hygiene, nursing, radiography, physical therapy assistant, and paramedic programs on July 15th, 2015. The invitation included a brief explanation and purpose of the study, the date and times available for survey administration, the length of time needed to complete the survey, and my contact information. I also requested permission to enter the classroom at the beginning or end of a class session to administer and collect the survey from students. Upon entering the classroom, I read a script (Appendix D), as well as provided a copy of the script to each participant, explaining the purpose of the study, the role of the participants, implied consent, that their input is anonymous, and that participation is totally voluntary, and their ability to opt out of participation at any time.

For the faculty surveys, I contacted via email (Appendix E) each individual faculty within the dental hygiene, nursing, radiography, physical therapy assistant, and paramedic programs.

The email included an invitation to participate including, the purpose of the study, that their input is anonymous, that participation is totally voluntary, and that they may opt out of participation at any time, as well as a hyperlink to the survey instrument. I requested their participation in the study and allowed two weeks for them to complete the survey via Survey Monkey. After this time period I sent a follow up email thanking those who participated and encouraged those who hadn't to participate, with an extension of one week to complete the survey (Appendix F).

The survey (Appendix G) included three parts. Part one includes questions about demographic information. Part two consists of the 15 item list of teaching elements revised from Hoppes and Chesbro (2003). Participants will indicate their response on a five point modified Likert scale. Part three consists of one open ended question for faculty and students regarding preferred teaching and learning methods.

Data Analysis Procedures

Data from the survey will be coded and analyzed using IBM SPSS. Coding will be associated to each of the Modified Likert scaled statements as follows: 5=strongly agree; 4= agree; 3= neutral; 2=disagree; 1=strongly disagree. Frequency distributions will be computed for each response as well as other descriptive statistics (mean, standard deviation, and range) for each variable. Independent sample t-tests will be conducted to determine if there are differences between the responses of students and instructors.

CHAPTER 4

ANALYSIS OF DATA

Overview

Because many factors can influence learning within allied health education, there is a need to understand perceptions of both faculty and students regarding effective elements of teaching. Data collected from associate level allied health program directors, faculty, and students regarding their views of effective elements of teaching inform this study.

Population

The population for this study was limited to associate degree seeking allied health students and full-time faculty members in the dental hygiene, nursing, radiography, physical therapy assistant, and paramedic programs at a technical college in the northeastern region of the state of Georgia. I obtained a faculty email list and a student course list for all associate level allied health program, with the permission of Glen Henry, the dean of life sciences and public safety. An email was sent to all program directors on Thursday July 23rd, 2015 requesting permission to email faculty regarding participation as well as permission to enter the classroom and administer surveys to the students. Four out of five directors gave their permission; the PTA program director did not grant permission due to the program director's concern that there was a lack of anonymity for her students. I explained the IRB process and the fact that I was not asking questions pertaining to her program specifically, but she still refused to allow her program to participate.

Respondents

The final faculty response rate was 73.68% (14 out of 19), and the final student response rate was 86.79% (92 out of 106), making the final overall response rate 83.2% (104 out of 125).

Demographics

Respondents were associated with one of four associate degree programs: dental hygiene, nursing, radiography, and paramedic technology. The majority of faculty and students self-identified with the nursing program (52.9%), followed by radiology (18.3%), paramedicine (15.4%), and dental hygiene (13.5%) (see Table 1).

Table 1.

Allied Health Discipline

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dental Hygiene	14	13.5	13.5	13.5
	Radiology	19	18.3	18.3	31.7
	Nursing	55	52.9	52.9	84.6
	Paramedicine	16	15.4	15.4	100.0
	Total	104	100.0	100.0	

The largest percentage of respondents, 30.8%, were 25-34 years of age, 28.8% were 18-24 years of age, 22.1% were 35-44 years of age, 12.5% were 45-54 years of age, 3.8% were 55-64 years of age, and 1% were 65-74 years of age category (see Table 2).

Table 2.

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	30	28.8	29.1	29.1
	25-34	32	30.8	31.1	60.2
	35-44	23	22.1	22.3	82.5
	45-54	13	12.5	12.6	95.1
	55-64	4	3.8	3.9	99.0
	65-74	1	1.0	1.0	100.0
	Total	103	99.0	100.0	
Missing	System	1	1.0		
Total		104	100.0		

Data Analysis

This was a cross-sectional technique. I collected data using a survey that consisted of 15 modified Likert-scale questions, and two open ended questions, one for faculty and a similar question for students. There were five possible responses for each modified Likert-scale question. I converted the responses from an Excel format to an SPSS file and used SPSS Version 23 for analysis. To facilitate quantitative analysis I coded the responses to the modified Likert-scale questions as follows: Strongly agree (5), Agree (4), Neutral (3), Disagree (2), Strongly Disagree (1). For the 15 modified Likert items, I used independent sample t-tests to determine if there were significant differences between the mean responses of students and faculty. As a part of the analysis, I also reviewed Levene's Test for equality of variances. The resulting p-value for each analysis guided the interpretation of the independent samples t-test. For the purpose of this study, I used a confidence level of 95% (alpha $\leq .05$).

For 14 out of 15 of the questions, there was no significant difference in the responses of students and faculty (see Appendix H). However, there was a significant difference between the responses of students and faculty for question 15 (alpha $\leq .05$, $p = .011$). On Question 15 the average faculty response was 4.00 and the average student response was 4.49 (Appendix I).

The open-ended question responses were similar to a point between faculty and students, and individuals within each designation. Faculty were asked about their preferred teaching methods, and students were asked their preferred learning methods; the responses indicated that faculty and students both preferred lecture, power point, hands on learning, and open discussion. Along with the similarities were some differences as well. Students listed that they preferred the instructor to relate the classroom to real life scenarios, use repetition, and use multiple methods, while faculty did not list any of those as their preferred teaching methods (see Table 3).

Table 3.

My Study's Preferred Learning Methods

Faculty's Preferred Teaching Methods	Lecture (9) Power Point (6) Hands on Learning (5) Open Discussion (5) Laboratory Practicums (2) Demonstration (2) Group Work (1) Question and Answer (1) Lecture with Visual Aids (1) Case Study (1) Audio-Visual (1)
Student's Preferred Learning Methods	Hands on Learning (45) Visual (36) Lecture (14) Power Point (9) Open Discussion (9) Repetition (5) Multiple Methods (5) Independent Study (4) Demonstration (3) Relating with Real Life Scenarios (2) Interactive (1) Auditory (1) Flipped Classroom (1)

Summary

In summary, the survey showed at a confidence level of 95% there was no difference in mean confidence levels between faculty and student responses on 14 of the 15 variables listed in my study. The only statistically significant difference was with question number 15 where the faculty mean response was 4.00 and students mean response was 4.49 (Appendix I). The open-ended questions showed some similarities between faculty and students as well.

CHAPTER 5

CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

The purpose of this study was to examine the faculty and student views of effective elements of teaching in associate level allied health programs. Since allied health students must not simply memorize content, but retain it and apply the material in the clinical setting and actual patients, it is important for instructors to approach their delivery of content in order to reach every student in the classroom. The educational and clinical instruction in allied health programs provides students with the knowledge and skills needed for the allied health profession. Instructors can use a variety of teaching methods to help reach every student, but how do they know what is effective for the learner? According to Jande, Kamath, and D'Souza (2014), it is "often portrayed in literature and academic settings that effective teaching is the cornerstone of the student learning environment" (p.63); however, effective teaching can be challenging to define. It is difficult to find a definitive definition simply because the criteria can differ for each instructional situation and each individual teacher. This research study included information from allied health faculty and students regarding their views on effective teaching, as well as their preferred teaching and/or learning methods. This research was my attempt to gather information that will be helpful to both current and future health educators.

The following questions guided this research:

1. What are the views of allied health students of effective elements of teaching?
2. What are the views of allied health faculty of effective elements of teaching?
3. What teaching methods do students find helpful to their learning experience?
4. What are the preferred teaching methods of allied health faculty?

Conclusions

The results showed a confidence level of 95% with little to no difference in mean confidence levels between faculty and student responses. The only significant statistical difference was with question number 15, which asked respondents to indicate how much they agree/disagree that teacher's friendliness, concern, and respect for students is important for an effective learning environment. This question was significantly different with faculty response as Agree (4.00) and student response Strongly Agree (4.49). Hoppes and Chesbro (2003) also found a statistical difference with that same element. "Of students 36% believed that this item ranked in the top five, whereas 11% of faculty agreed ($p = 0.001$)" (Appendix K) (Hoppes & Chesbro, 2003, p. 169). Hoppes and Chesbro (2003) concluded that "students appeared to focus on the word respect when discussing this item in focus groups" and "faculty seemed to focus on the word friendliness when discussing this item in focus groups" (p. 169). Contrary to my results, Hoppes and Chesbro (2003) also found statistical differences between faculty and student responses pertaining to the teacher's ability to motivate students to meet high standards of performance, the teachers ability to challenge intellectually and encourage independent thought, the teachers encouragement of questions and discussion, and the teacher's ability to use a number of teaching techniques (lecture and discussion).

Unlike the 15 modified Likert-scale questions, the open-ended questions showed some similarities, and multiple differences. While some answers matched between designations, there were a few elements that the students listed as important that were not included in the faculty list. For example, students listed that they preferred the instructor to relate the classroom to real life scenarios, use repetition, and use multiple methods, while faculty did not list any of those as their preferred teaching methods. While faculty probably listed the methods they are most accustomed to, the students most likely didn't list the best methods, but the methods they were more comfortable or familiar with.

As a faculty member, the results of my study were what I expected based on personal experiences and research. As an instructor, I like to get feedback from students on elements that are working in the

classroom. Most student say that they love power points if used properly, and that they learn better from hands on learning instead of lecture alone. They also find things important such as a teachers concern for them, their ability to give valuable feedback, and the encouragement of discussion. Students enjoy interaction and want more than simply lecture. Hoppes and Chesbro's (2003) study closely paralleled an earlier study by Feldman (1988) who identified 22 instructional elements commonly considered important by faculty and students. The Feldman study involved undergraduate and graduate students, but not specifically allied health students. Hoppes and Chesbro (2003) took those 22 elements and created a list of 15 elements for allied health students specifically (Appendix J), combining some elements and discarding others. Out of those 15 elements the results were similar to the Feldman study and my study as well. Also, Epting, et al. (2003) investigated effective teaching based on characteristics with results including some of the same elements of importance such as knowledge of instructor, enthusiasm, and respect.

Discussion

While there is similarity between faculty and students regarding their views of effective elements of teaching, they seemed to view some preferred learning/teaching methods in dissimilar ways. Allied health faculty and students in my study viewed 14 out of 15 elements in similar ways, but the dissimilar views came along with the open-ended questions that asked faculty their preferred teaching methods, and students their preferred learning methods. While faculty and students both agreed that lecture, power points, hands on learning, demonstration, and open discussion were important methods, students listed independent study, repetition, and the use of multiple methods, and faculty did not. Some faculty and student responses were listed only one time, and while they were important to someone, there is not enough evidence that they are important to allied health education. The one answer responses for students included interactive, auditory, and flipped classroom. As an instructor, I wonder if these answers were important to others and simply not thought of, or if maybe most students did not know what the term auditory or flipped classroom even meant. As an instructor I understand flipped classroom to mean that

the lecture portion is reviewed at home along with any homework assignments and class time is reserved for demonstration, hands on learning, and discussion. This one method could cover some of the most important elements listed by both faculty and staff, but may not be a common term for faculty or students. There are many possibilities for the reasoning behind the single answers, and if the population was larger, there could have more similarities, or even more single answers.

There is definitely more agreement than disagreement, and some of the preferred methods of each group could be brought together and used as multiple methods as the students suggested; however, faculty would need to investigate which methods could be used in combination together for the multiple method approach to be successful. Two possible examples could be students working on case studies as an independent assignment and laboratory practicums being used in repetition to help students remember the information.

> Although it may not be desirable for faculty to think more like students and vice versa, understanding of each other's views can be beneficial to both. In clinical practice, students work collaboratively with patients, families, team members, and administrators. The classroom can be an appropriate place to model collaborative professional relationships, and this can be accomplished through regular conversations between faculty and students about how instruction and professional development are proceeding (Hoppes & Chesbro, 2003, p. 172).

Instead of faculty relying on their own preferred teaching methods, they can now collaborate with other faculty to discuss the outcomes of this survey and understand how students learn in an attempt to make modifications that could reach each student represented. Faculty within my program have already begun to discuss valuable ways to use the information gained from this study to improve the dental hygiene program. For example, we use laboratory practicums already, but we discussed pairing the students up for feedback from each other, and allowing them to use the grade sheet along with plenty of repetition to be better prepared for the faculty graded laboratory practicum. While it may be hard to incorporate every

element listed as preferred by the students in this study, it is definitely worth looking at the most common response and incorporating them into the classroom to reach as many students as possible. This is a way to use the responses of the survey as well as the responses to the open-ended questions pertaining to students' preferred teaching methods to improve the educational experience of allied health students.

Recommendation

I collected this research to examine the faculty and student views of effective elements of teaching in associate level allied health programs. Further research could be conducted to provide more accurate data:

1. This study was conducted on a small scale at one community college. Replicating the study at more institutions would provide a depth of information not available in this study.
2. I conducted this study during the summer term, which has a lower enrollment versus fall and spring terms. Repeating this study during fall or spring terms might yield different results.
3. This study was not conducted to compare results between programs, but it would be interesting to see if the results varied by program.
4. All students and faculty were considered as a group, though age was one of the demographic questions. Future research could compare responses by age group to see if there is a difference in responses by age.

Summary

Through this study I examined the views of effective teaching in associate level allied health programs. While the results support that faculty and students are not that far apart in their views related to effective teaching methods, there is still more work to be done to improve the learning environment in allied health.

REFERENCES

Armstrong, G. R., Tucker, J. M., & Massad, V. J. (2009). Interviewing the experts: Student produced podcast. *Journal of Information Technology Education: Innovations in Practice, 8,* 79-90.

Borges, N. J., Manuel, S. R., Elam, C. L., & Jones, B. J. (2010). Differences in motives between millennial and generation x medical students. *Medical Education, 44,* 570-576. doi:10.1111/j.1365-2923.2010.03633.x

Buskist, W., Sikorski, J., Buckley, T., & Saville, B. K. (2002). Elements of master teaching. In S. F. Davis & W. Buskist (Eds), *The teaching of psychology: Essays in honor of Wilbert J. McKeachie and Charles L. Brewer (*pp.27-39). Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Cottrell, R. R., & McKenzie, J. F. (2011). *Health promotion & education research methods: Using the five-chapter thesis/dissertation model.* Sudbury, MA: Jones and Bartlett Publishers

Hande, H. S., Kamath, S. R., & D'Souza, J. D. (2014). Students' perception of effective teaching practices in a medical school. *Education in Medicine Journal, 6,* 63-66

Henry, R. K., & Gibson-Howell, J. (2011). A comparison of millennial dental hygiene student and faculty classroom expectations. *The Journal of Dental Hygiene, 85*(3), 229-239.

Hoppes, S., & Chesbro, S. (2003). Elements of instruction in allied health: Do faculty and students value the same things? *Journal of Allied Health, 32*(3), 167-172.

Howe, N., & Strauss, W. (2000). *Millennials rising: The next great generation.* New York, NY: Vintage Books a division of Random House, Inc.

Hunt, G. H., Wiseman, D. G., & Touzel, T. J. (2009). *Effective teaching: Preparation and implementation*. Fourth Edition. Charles C. Thomas, Publisher, Ltd.

Ingrassia, J. M. (2011). Effective radiography clinical instructor characteristics. *Radiologic Technology 82*(5), 409-420.

Johanson, L. (2012). Teaching the millennial generation: Considerations for nurse educators. *Nurse Educator, 37*(4), 173-176. doi: 10.1097/NNE.0b013e31825a875a

Kimbrough-Walls, V. (2013). A new look at learning. *CDHA Journal, 29*(2), 27-29.

Loewen, P. S., & Jelescu-Bodos (2013). Learning styles and teaching perspectives of Canadian pharmacy practice residents and faculty preceptors. *American Journal of Pharmaceutical Education, 77*(8), 1-6.

Malik, A. N., & Bashir, S. (2015). Good teacher; student's perception about top qualities in health sciences. *The Professional Medical Journal, 22*(5), 670-673.

Mangold, K. (2007). Educating a new generation: Teaching baby boomer faculty about millennial students. *Nurse Educator, 32*(1), 21-23.

National Survey of Student Engagement (2013). *A fresh look at student engagement. Annual results 2013 (NSSE 2013).* http://safesupportivelearning.ed.gov/resources/fresh-look-student-engagement-nsse-annual-results-2013. Accessed August 14, 2014.

O'Connor, A. B. (2006). *Clinical Instruction and Evaluation.* Sudbury, MA: Jones and Bartlett Publishers.

Pardue, K. & Morgan, P. (2008). Millennials considered: A new generation, new approaches, and implications for nursing education. *Nursing Education Perspectives, 29*(2), 74-79.

Riener, C. & Willingham, D. (2010). The myth of learning styles. *Change Magazine* 33-35.

Royal, K. & Stockdale , M. (2015). The myth of learning styles: What medical educators need to know. *ENT Journal,* 132-134.

Santangelo, T., & Tomlinson, C. A. (2009). The application of differentiated instruction in postsecondary environments: Benefits, challenges, and future directions. *International Journal of Teaching and Learning in Higher Education, 20*(3), 307-323.

Schaeffer, G., Epting, K., Zinn, T., & Buskist, W. (2003). Student and faculty perceptions of effective teaching: A successful replication. *Teaching of Psychology, 30*(2), 133-136.

Singh, S., Pai, D. R., Sinha, N. K., Kaur, A., Soe, H. H. K., & Barua, A. (2013). Qualities of an effective teacher: what do medical teachers think? *BMC Medical Education, 13*(138). http://www.biomedcentral.com/1472-6920/13/128. Accessed August 14, 2014.

Stegeman, C. A., & Zydney, J. (2010). Effectiveness of multimedia instruction in health professions education compared to traditional instruction. *The Journal of Dental Hygiene, 84*(3), 130-136.

Steves, A. M. (2005). Improving the clinical instruction of student technologists. *Journal of Nuclear Medicine Technology, 33*(4), 205-209.

Twombly, S. & Townsend, B. (2008). Community College Faculty: What we need to know. *Community College Review, 36*(1), 5-24. doi: 10.1177/009155108319538.

U.S. Department of Education, National Center for Education Statistics. Digest of Education Statistics 2005 (NCES 2006-030). http://nces.ed.gov/programs/digest/d05. Accessed August 14, 2014.

U.S. Department of Education, National Center for Education Statistics. Digest of Education Statistics 2010 (NCES 2011-015). http://nces.gov/pubs2011/2011015.pdf. Published April 2011. Accessed August 14, 2014.

Whitney, R. (2014). Differentiating instruction in postsecondary education. *Radiologic Technology, 85*(4), 458-462.

Willingham, D., Hughes, E. & Dobolyi, D. (2015). The scientific status of learning style theories. *Teaching of Psychology, 42*(3), 266-271.

Wilson, M. E. (2004). Teaching, learning, and millennial students. *New Directions for Student Services, 106*, 59-71.

APPENDICES

Appendix A

S. Hoppes (personal communication, March 17, 2015)

Hi Jennifer,

I received your email this morning. Apologies if I'm holding things up. You have my full permission to use my survey & adapt it as you see fit. Is there something beyond this you need of me? I am at a meditation retreat this week with limited access to email, but I will try to respond as quickly as possible.

Thanks. Steve

"Burrell, Jennifer" <jburrell@athenstech.edu> wrote:

Dr. Hoppes,
I was emailing in reference to your article *Elements in Allied Health: Do Faculty and Students Value the Same Things?* I am a student enrolled in the Masters of Allied Health program at East Tennessee State University and I am current working on my thesis. My research topic is very similar to yours. I am comparing faculty versus student expectations of effecting teaching methods. I was hoping to gain your permission to use your survey included in the article above. I feel like your survey is a great start for my research. I was thinking with your permission I would like to change the survey up a little and add a different ranking system or possibly put your elements in the form of questions. Would you allow me to do this? If not could I use survey as is? Any suggestions that you have for me would be greatly appreciated! Thank you,
Jennifer Burrell

Jennifer Burrell, RDH, BASDH, CDA
Athens Technical College
Dental Hygiene/Dental Assisting
(706)355-5170
jburrell@athenstech.edu

From: Steve Hoppes [mailto:stevehoppes@hotmail.com]
Sent: Tuesday, March 17, 2015 2:10 PM
To: Burrell, Jennifer
Subject: Touching base
Hi, Jennifer,
My colleague, Dr. Hamilton, forwarded your email. If there's any way I can support you in your work, I'm happy to do it. Just let me know how I can help.
Best wishes.
Steve

Appendix B

Approval Letter

Athens Technical College

A Unit of the Technical College System of Georgia

Flora W. Tydings, Ed.D.
President

800 U S Highway 29 N
Athens, GA 30601

June 22, 2015

Dr. Susan Epps, Chair
East Tennessee State University
Johnson city, TN 37614

Re: Research Approval

Dear Dr. Epps,

This letter is to confirm that Athens Technical College has granted permission to Jennifer Burrell to conduct research for her graduate studies at East Tennessee State University. The study titled "Student and Faculty Views of Important Elements of Teaching in Associate Level Allied Health Programs" is to be conducted within the Life Sciences Division at Athens Technical College.

Respectfully,

Glenn Henry, MA, PMDC
Dean of Life Sciences and Public Safety

Attestation of Compliance*

As Dean of Life Sciences and Public Safety, I attest that our educational institution has policies in conjunction with parents regarding the following:

- The right of a parent of a student to inspect, upon the request of the parent, a survey created by a third party before the survey is administered or distributed by a school to a student.
- Any applicable procedures for granting a request by a parent for reasonable access to such survey within a reasonable period of time after the request is received.
- Arrangements to protect student privacy that are provided by the agency in the event of the administration or distribution of a survey to a student containing one or more of the following items (including the right of a parent of a student to inspect, upon the request of the parent, any survey containing one or more of such items):
  - Political affiliations or beliefs of the student or the student's parent.
  - Mental or psychological problems of the student or the student's family.
  - Sex behavior or attitudes.
  - Illegal, anti-social, self-incriminating, or demeaning behavior.
  - Critical appraisals of other individuals with whom respondents have close family relationships.
  - Legally recognized privileged or analogous relationships, such as those of lawyers, physicians, and ministers.
  - Religious practices, affiliations, or beliefs of the student or the student's parent.
  - Income (other than that required by law to determine eligibility for participation in a program or for receiving financial assistance under such program).
- The right of a parent of a student to inspect, upon the request of the parent, any instructional material used as part of the educational curriculum for the student.
- Any applicable procedures for granting a request by a parent for reasonable access to instructional material received.
- The administration of physical examinations or screenings that the school or agency may administer to a student.
- The collection, disclosure, or use of personal information collected from students for the purpose of marketing or for selling that information (or otherwise providing that information to others for that purpose), including arrangements to protect student privacy that are provided by the agency in the event of such collection, disclosure, or use.
- The right of a parent of a student to inspect, upon the request of the parent, any instrument used in the collection of personal information before the instrument is administered or distributed to a student.
- Any applicable procedures for granting a request by a parent for reasonable access to such instrument within a reasonable period of time after the request is receive

*Required by East Tennessee State University IRB when human subject research is conducted m institutions receiving funding from the Department of Education. This form will be filed with the ETSU IRB.

Institutional Rep. _____ 6/29/15
(Signature) (Date)

Appendix C

Invitation to Program Directors

Dear Allied Health Program Director,

I invite you and your students to participate in a research study being conducted as part of the degree requirements for my Master's degree in the Department of Allied Health at East Tennessee University, a doctoral research university located in Johnson City, Tennessee. The research project, under the supervision of Dr. Susan Epps, Committee Chair, will take place Friday, July 24th 2015.

The purpose of this study is to examine the views of you, your faculty, and your students regarding elements of teaching. Participation is voluntary, there is no foreseeable risk of participation, and all responses will remain anonymous. Information collected in this study may benefit educational programs in the allied health field.

Your participation in this study is important, and greatly appreciated; however, you may opt-out of participating in this study at any time.

Please see the attached schedule and select a time slot where I could administer the survey to your students. The administration of the survey to your students should take 30-45 minutes.

Also, with your permission, I will email the survey to your faculty, to complete via Survey Monkey.

If you, your faculty, or your students have any questions about this research project please contact me at (770) 595-1626 or Dr. Susan Epps at (423) 547-4911.

Thank you for your time and consideration,

Jennifer Burrell, RDH, BASDH

Appendix D

Script for Students

Good Morning/Afternoon,

My name is Jennifer Burrell and I am conducting a research study concerning elements of effective teaching.

The purpose of this study is to examine faculty and student views of elements of teaching in associate level allied health programs.

You have been invited to participate in this study because you are a student in an allied health program at Athens Technical College. If you choose to participate in this study, you will complete the survey with a blue or black pen, and place it in the box when completed. The survey should take around 30 minutes to complete.

To maintain confidentiality, please do not place your name on the survey. Please be honest and accurate with all your responses. The last question will be open-ended, and your response is important as it will give added information that may not be reflected in the survey. Please do not leave this question blank.

You may opt out of participation in this study. If you choose to do so, please still take a survey and simply leave it blank. This will help to maintain confidentiality, and eliminate potential for determining which individuals opted out. Please place your survey in the box as you leave along with the others.

Participation is voluntary, and there is no foreseeable risk of participation in this study. You must be 18 years of age to participate in this study and your completion and submission of this survey is your consent to participate in this research. Information collected in this study may benefit educational programs in the allied health field.

Your participation is this study is important and greatly appreciated. If you have any questions about this research project please contact me at (770) 595-1626 or Dr. Susan Epps at (423) 547-4911.

Thank you for your time.

Appendix E

Invitation to Faculty

Dear Allied Health Faculty,

You are invited to participate in a research study I am conducting as a part of the requirements for my master's degree in Allied Health Leadership at East Tennessee State University in Johnson City, Tennessee.

The purpose of the study is to examine student and faculty views of elements of teaching. If you chose to participate in this study, please click on the link below and complete the survey by Monday, August 10th, 2015. You must be 18 years of age to participate in this study and your completion and submission of this survey is your consent to participate in this research. Please note that there is no foreseeable risk, and your responses will be kept confidential. Information collected in this study may benefit educational programs in the allied health field.

If you have any questions or concerns, please contact me:

Jennifer Burrell, RDH, BASDH

(770) 595-1626

jburrell@athenstech.edu

Appendix F

Follow up email to Faculty

Dear Allied Health Faculty,

Two weeks ago, I emailed you regarding a survey for a research study I am conducting concerning elements of teaching.

If you have already completed the survey, please disregard this email and thank you for your participation. If not, please take a few minutes to complete the survey and return it to me by Monday, August 17th, 2015. Your input is extremely important to allied health education and this college.

Thank you for your time and consideration,

Jennifer Burrell, RDH, BASDH

Re: Original email attached

Dear Allied Health Faculty,

You are invited to participate in a research study I am conducting as a part of the requirements for my master's degree in Allied Health Leadership at East Tennessee State University in Johnson City, Tennessee.

The purpose of the study is to examine student and faculty views of elements of teaching. If you chose to participate in this study, please click on the link below and complete the survey by Monday, August 10th, 2015. You must be 18 years of age to participate in this study and your completion and submission of this survey is your consent to participate in this research. Please

note that there is no foreseeable risk, and your responses will be kept anonymous. Information collected in this study may benefit educational programs in the allied health field.

If you have any questions or concerns, please contact me:

Jennifer Burrell, RDH, BASDH

(770) 595-1626

jburrell@athenstech.edu

Appendix G

Research Study

This survey is being conducted for research purposes on perceived effective teaching methods in allied health programs at Athens Technical College. You are being asked to voluntarily participate in rating effective teaching methods.

Instructions: Do not enter your name on the survey.

Students: Use blue or black pen Faculty: Click the box that applies

Demographic Information: Please circle the appropriate information. You **MUST** be 18 years of age to participate.

Age: 18-24 25-34 35-44 45-54 55-64 65-74

Designation: Student Faculty

Allied Health Discipline:

Dental Hygiene

Nursing

Paramedicine

Physical Therapy Assistant

Radiology

For each item listed below, please indicate how much you agree/disagree that it is important for an effective learning environment.

1. Teacher's stimulation of interest in the course and its subject matter.
   Strongly Agree Agree Neutral Disagree Strongly Disagree

2. Teacher's enthusiasm for the subject and/or for teaching.
   Strongly Agree Agree Neutral Disagree Strongly Disagree

3. Teacher's knowledge of the subject.
   Strongly Agree Agree Neutral Disagree Strongly Disagree

4. Teacher's preparation and organization of the course.
   Strongly Agree Agree Neutral Disagree Strongly Disagree

5. Teacher's clarity, understandability, and communication skills.
   Strongly Agree Agree Neutral Disagree Strongly Disagree

6. Teacher's sensitivity to, and concern with, the class's understanding and progress.
   Strongly Agree Agree Neutral Disagree Strongly Disagree

7. Teacher's ability to use many teaching techniques (lecture, discussion, audiovisual aids, group projects).
   Strongly Agree Agree Neutral Disagree Strongly Disagree

8. Teacher's fairness, as reflected in examinations and impartiality of evaluation.
   Strongly Agree Agree Neutral Disagree Strongly Disagree

9. Teacher's ability to give valuable feedback frequently.
   Strongly Agree Agree Neutral Disagree Strongly Disagree

10. Teacher's encouragement of questions and discussion.
    Strongly Agree Agree Neutral Disagree Strongly Disagree

11. Teacher's openness to opinions of others.
    Strongly Agree Agree Neutral Disagree Strongly Disagree

12. Teacher's ability to challenge intellectually and encourage independent thought.
    Strongly Agree Agree Neutral Disagree Strongly Disagree

13. Teacher's ability to motivate students to meet high standards of performance.
    Strongly Agree Agree Neutral Disagree Strongly Disagree

14. Teacher's clinical experience and ability to relate course material to clinical settings.
    Strongly Agree Agree Neutral Disagree Strongly Disagree

15. Teacher's friendliness, concern, and respect for students.
    Strongly Agree Agree Neutral Disagree Strongly Disagree

Please answer the question below as it applies to you:

16. Faculty: What are your preferred teaching methods?

    Students: What are your preferred learning methods?

    _____

    _____

    _____

Appendix H

Independent Sample Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Q1	Equal variances assumed	0.945	0.333	-0.828	102	0.41	-0.123	0.149	-0.418	0.172
	Equal variances not assumed			-0.785	13.628	0.446	-0.123	0.157	-0.461	0.214
Q2	Equal variances assumed	4.139	0.045	0.846	102	0.399	0.116	0.137	-0.156	0.388
	Equal variances not assumed			0.951	15.167	0.356	0.116	0.122	-0.144	0.375
Q3	Equal variances assumed	1.516	0.221	-0.692	101	0.491	-0.088	0.127	-0.34	0.164
	Equal variances not assumed			-0.6	11.73	0.56	-0.088	0.147	-0.408	0.232
Q4	Equal variances assumed	5.887	0.017	1.198	102	0.234	0.268	0.224	-0.176	0.712
	Equal variances not assumed			1.95	23.956	0.063	0.268	0.138	-0.016	0.552
Q5	Equal variances assumed	1.07	0.303	0.318	102	0.751	0.069	0.217	-0.361	0.498
	Equal variances not assumed			0.427	17.974	0.674	0.069	0.161	-0.27	0.407
Q6	Equal variances assumed	1.078	0.302	-0.098	101	0.922	-0.024	0.241	-0.502	0.455

	Equal variances not assumed			-0.134	15.874	0.895	-0.024	0.177	-0.399	0.352
Q7	Equal variances assumed	7.11	0.009	-0.537	102	0.592	-0.12	0.223	-0.561	0.322
	Equal variances not assumed			-0.785	20.044	0.442	-0.12	0.152	-0.437	0.198
Q8	Equal variances assumed	5.908	0.017	1.25	102	0.214	0.272	0.217	-0.16	0.703
	Equal variances not assumed			1.796	19.564	0.088	0.272	0.151	-0.044	0.588
Q9	Equal variances assumed	1.554	0.215	0.27	102	0.787	0.054	0.201	-0.344	0.453
	Equal variances not assumed			0.327	16.124	0.748	0.054	0.166	-0.298	0.406
Q10	Equal variances assumed	1.419	0.236	1.14	102	0.257	0.257	0.226	-0.19	0.705
	Equal variances not assumed			1.528	17.914	0.144	0.257	0.168	-0.097	0.611
Q11	Equal variances assumed	1.754	0.188	0.279	102	0.781	0.069	0.246	-0.42	0.558
	Equal variances not assumed			0.367	17.51	0.718	0.069	0.188	-0.326	0.464
Q12	Equal variances assumed	1.149	0.286	0.169	101	0.866	0.032	0.19	-0.344	0.408
	Equal variances not assumed			0.197	15.671	0.846	0.032	0.163	-0.313	0.377
Q13	Equal variances assumed	1.559	0.215	-0.088	102	0.93	-0.018	0.205	-0.425	0.389

	Equal variances not assumed			-0.11	16.545	0.914	-0.018	0.165	-0.367	0.33
Q14	Equal variances assumed	2.641	0.107	-1.128	102	0.262	-0.156	0.138	-0.43	0.118
	Equal variances not assumed			-1.001	13.196	0.335	-0.156	0.156	-0.491	0.18
Q15	Equal variances assumed	0.434	0.511	-2.578	102	0.011	-0.489	0.19	-0.866	-0.113
	Equal variances not assumed			-2.201	12.978	0.046	-0.489	0.222	-0.969	-0.009

Appendix I

Group Statistics

	Designation	N	Mean	Std. Deviation	Std. Error Mean
Q1	Faculty	12	4.58	0.515	0.149
	Student	92	4.71	0.481	0.05
Q2	Faculty	12	4.83	0.389	0.112
	Student	92	4.72	0.453	0.047
Q3	Faculty	11	4.73	0.467	0.141
	Student	92	4.82	0.39	0.041
Q4	Faculty	12	4.83	0.389	0.112
	Student	92	4.57	0.76	0.079
Q5	Faculty	12	4.67	0.492	0.142
	Student	92	4.6	0.727	0.076
Q6	Faculty	11	4.45	0.522	0.157
	Student	92	4.48	0.777	0.081
Q7	Faculty	12	4.25	0.452	0.131
	Student	92	4.37	0.752	0.078
Q8	Faculty	12	4.75	0.452	0.131
	Student	92	4.48	0.733	0.076
Q9	Faculty	12	4.5	0.522	0.151
	Student	92	4.45	0.669	0.07
Q10	Faculty	12	4.58	0.515	0.149
	Student	92	4.33	0.758	0.079
Q11	Faculty	12	4.17	0.577	0.167
	Student	92	4.1	0.826	0.086
Q12	Faculty	12	4.42	0.515	0.149
	Student	91	4.38	0.628	0.066
Q13	Faculty	12	4.42	0.515	0.149
	Student	92	4.43	0.684	0.071
Q14	Faculty	12	4.58	0.515	0.149
	Student	92	4.74	0.442	0.046
Q15	Faculty	12	4	0.739	0.213
	Student	92	4.49	0.602	0.063

Appendix J

Hoppes and Chesbro Elements

Directions: Among the following elements of teaching in allied health classes, please rank, in order, the five you think are most important. Use "1" to indicate the element that you think is most important in effective teaching, "2" to indicate the second most important element, and so on through "5." Use each number (1 to 5) one time.

Elements of Teaching	*Your Ranking*
Teacher's stimulation of interest in the course and its subject matter	
Teacher's enthusiasm for the subject and/or for teaching	
Teacher's knowledge of the subject	
Teacher's preparation and organization of the course	
Teacher's clarity, understandability, and communication skills	
Teacher's sensitivity to, and concern with, the class's understanding and progress	
Teacher's ability to use many teaching techniques (lecture, discussion, audiovisual aids, group projects)	
Teacher's fairness, as reflected in examinations and impartiality of evaluation	
Teacher's ability to give valuable feedback frequently	
Teacher's encouragement of questions and discussion	
Teacher's openness to opinions of others	
Teacher's ability to challenge intellectually and encourage independent thought	
Teacher's ability to motivate students to meet high standards of performance	
Teacher's clinical experience and ability to relate course material to clinical settings	
Teacher's friendliness, concern, and respect for students	

FIGURE 1. Online survey given to allied health faculty and students.

Appendix K

Hoppes and Chesbro Results

TABLE 1. Allied Health Faculty Responses to Online Survey (n = 55)

Question	Hits	1	2	3	4	5
Teacher's preparation and organization of the course	37	4	10	11	6	6
Teacher's knowledge of the subject	36	20	9	5	2	
Teacher's clarity, understandability, and communication skills	32	6	6	10	4	6
Teacher's clinical experience and ability to relate course material to clinical situations	28	2	11	3	9	3
Teacher's ability to challenge intellectually and encourage independent thought	25	7	3	7	5	3
Teacher's sensitivity to, and concern with, the class's understanding and progress	24	1	4	2	8	9
Teacher's enthusiasm for the subject and/or for teaching	21	3	3	3	4	8
Teacher's ability to motivate students to meet high standards of performance	16	5		5	3	3
Teacher's encouragement of questions and discussion	12		1	3	3	5
Teacher's stimulation of interest in the course and its subject matter	12	5	2	1	1	3
Teacher's fairness, as reflected in examinations and impartiality of evaluation	11	2	2	2	3	2
Teacher's ability to give frequently valuable feedback	8			1	4	3
Teacher's friendliness, concern, and respect for students	6		1	1		4
Teacher's ability to use many teaching techniques (lecture, discussion)	5		3		2	
Teacher's openness to opinions of others	2			1	1	

VITA

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