2013

Student participation in course evaluations: a comparison within degree levels

Yvonne Aitken
Eastern Washington University

Student Participation in Course Evaluations: A comparison within Degree Levels

A Thesis

Presented in Partial Fulfillment of the Requirements for the

Degree of Masters of Science

in

Dental Hygiene

in the

College of Graduate Studies

Eastern Washington University

by

Yvonne Aitken

Summer 2013

Major Professor:

Rebecca Stolberg, RDH, MSDH

THESIS OF YVONNE AITKEN APPROVED BY

_____ DATE_____
REBECCA L. STOLBERG, GRADUATE STUDY COMMITTEE

_____ DATE_____
ANN O'KELLEY WETMORE, GRADUATE STUDY COMMITTEE

_____ DATE_____
NANCY BIRCH, GRADUATE STUDY COMMITTEE

MASTER'S THESIS

In presenting this thesis in partial fulfillment of the requirements for a master's degree at Eastern Washington University, I agree that the JFK Library shall make copies freely available for inspection. I further agree that copying of this project in whole or in part is allowable only for scholarly purposes. It is understood, however, that any copying or publication of this thesis for commercial purposes, or for financial gain, shall not be allowed without my written permission.

Signature_____

Date_____

Human Subjects Approvals

Eastern Washington University

at Cheney and Spokane

MEMORANDUM

To: Yvonne Aiken, Department of Dental Hygiene, 160 HSB

From: Sarah Keller, Chair, Institutional Review Board for Human Subjects Research

Date: April 5, 2013

Subject: Review of HS-4223 *Student Participation in Course Evaluations: A Comparison within Graduate Levels*

Human subjects protocol HS-4223 *Student Participation in Course Evaluations: A Comparison within Graduate Levels* has been reviewed and determined to be exempt from further review according to federal regulations for the Protection of Human Subjects under CFR Title 45, Part 46.101(b)(1-6), conditional upon the changes listed below being made and approved. Research qualifying for an exemption is valid for a period of one year, to April 5, 2014. If you wish to continue gathering data for the study after that date, you must file a Renewal of Approval application *prior to its expiration*, otherwise the project will be closed and you would need to submit a new application for IRB review if you wish to continue the research.

A signed, approved copy of your application is enclosed.

Before you begin:

1. Since your study is anonymous you shouldn't use a consent form. You should, however, provide them with information about the study prior to their choosing whether or not to participate and the usual way to do this is with an information sheet that they can keep. You should just convert your consent form to an information sheet as it has the required information. The signature on the information sheet may be yours if you want to, but this isn't necessary. They aren't going to sign it.
2. Your Investigator Script should take out all the information about the consent form
3. Would you please send me copies of the revised documents for our files.

If subsequent to initial approval the research protocol requires minor changes, the Office of Grant and Research Development should be notified of those changes. Any major departures from the original proposal must be approved by the appropriate IRB review process before the protocol may be altered. A Change of Protocol application must be submitted to the IRB for any substantial change in protocol.

If you have additional questions please contact me at 359-7039; fax 509-359-2474; email skeller@ewu.edu. It would be helpful if you would refer to HS-4223 if there were further correspondence as we file everything under this number. Thank you.

cc: R.Galm
R,Stolberg
Graduate Office

Abstract

Purpose

Identifying participation motivation within degree levels may offer insight and improve Course Evaluations (CEs) effectiveness.

Problem Statement

CEs have been used widely in educational settings to gain feedback from students. Studies within literature address participation as a critical factor in gaining feedback. Literature also demonstrates purpose and meaning behind CEs, factors that contribute to participation, and recommendations for improvement, in addition to gaps in research. Little is known how level of degree (undergraduate, Graduate, and Doctorate) affects participation in CEs.

Method

This study was designed to address the following research objectives: (a) to determine health professional students' awareness of how CEs may be utilized; (b) to determine if health professional students believe information obtained from CEs is utilized by faculty and administrators; (c) to determine if differences exist in participation of CEs by levels of degree; and (d) to determine if health professional students prefer online or traditional methods of delivery of CEs. Sample was collected from Eastern Washington University's Health Science programs: Dental Hygiene, BSDH students; Communication Disorders, BSCD students (*N*=173); Communication Disorders Post Baccalaureate Certificate students (*N*=17); Dental Hygiene Masters, MSDH students; Masters Occupational Therapy, MSOT students (*N*=72); and Doctorate Physical Therapy, DPT; Doctorate of

Dental Surgery, DDS students (*N*=108). An anonymous questionnaire asked a series of participation motivators and factors, using a 7-Point Likert type scale. Open-comment questions were also asked. Students were informed of the study and purpose before asked to voluntarily complete the questionnaire.

Results

The results suggest health profession students are aware of how CEs may be utilized. Health professional students also believe that CEs have been explained, in addition to understanding the purpose of CEs. Students are aware that retention, promotion, and tenure are variables that are utilized from CE. However, students' awareness of salary decisions was lower. Health professional students believe information obtained from CEs is utilized by faculty and administrators. Participation differences in CEs between degree levels indicated participation in CEs does increase between Baccalaureate and Masters students. However, there was little difference between Masters and Doctorate students. Results also indicated graduate students (both Doctorate and Masters) were higher than Baccalaureate students when asked if participation in CEs increase between undergraduate and graduate studies. When determining if students prefer online or traditional delivery of CEs, results show the preference was online.

Conclusions

Further comparison studies between student degree levels and participation may provide valuable insight on how CEs are implemented and distributed. Additionally, increased participation gains valuable feedback from students who offer insight regarding student motivation to complete CEs. Changing course content, curriculum and

instruction benefits the learning environment. Recognizing how degree levels may play a part in student motivation to participate in CEs, allows for design modifications to suite the various degrees. Further comparison studies between degree levels and participation may provide valuable insight on how CEs are implemented and distributed. The study supports the following National Dental Hygiene Research Agenda objective:

C. Professional Education and Development: Studies in this category are concerned with educational methods, curricula, students and faculty; recruitment and retention of students and faculty; and, promoting graduate education and career path options (American Dental Hygienists Association, 2007).

Acknowledgements

I would like to thank Rebecca Stolberg, RDH, MSDH, my committee chairperson, whose support has allowed me to meet my goal of becoming an MSDH. The process would not have been possible without Rebecca's encouragement and faith in my graduate endeavors.

I would also like to thank Ann O'Kelley Wetmore, RDH, MSDH and Dr. Nancy Birch, for their continued support during my thesis project as members of my thesis committee. Ann's support was valuable in keeping me grounded, and Dr. Birch was very helpful in providing me her expertise, at no cost, with my statistical data.

Lastly, I would like to acknowledge my family who has supported me these past two years, sacrificing much, and having faith to see me succeed and reach my professional goals.

Table of Contents

List of Tables

Tables

List of Abbreviations

Abbreviations

CEs	Course Evaluations
EWU	Eastern Washington University
PT	Physical Therapy
OT	Occupational Therapy
CD	Communication Disorders
DH	Dental Hygiene
DDS	Doctor of Dental Science
BSDH	Bachelor of Science Dental Hygiene
MSDH	Master of Science Dental Hygiene
BSCD	Bachelor of Science Communication Disorders
MSCD	Master of Communication Disorders
MSOT	Master of Occupational Therapy

Introduction

Introduction to the Research Question

Course Evaluations (CEs) have been used widely in educational settings to gain feedback from students. Studies within literature address participation as a critical factor in gaining feedback. Literature also demonstrates purpose and meaning behind CEs, factors that contribute to participation, recommendations for improvement, and gaps in research. Little is known how degree levels (undergraduate, graduate, and doctorate) affects participation in CEs.

Background of Study

Feedback from students allows curriculum and course development modification and improvement. Additionally, CEs feedback is utilized to measure teacher effectiveness for tenure, retention, promotion and salary increase. Studies within the literature address participation as a critical factor in gaining feedback. Research also indicates that participation within student populations is poor. Authors have identified gaps in research indicating specific factors that affect motivation to participate as well as validity of CEs. The literature review demonstrates purpose and meaning behind CEs, factors that contribute to participation, recommendations for improvement, recommendations for future studies, in addition to gaps in research. Little is known how degree levels (undergraduate, graduate, and doctorate) affects participation in CEs. Identifying participation motivation within education levels may offer insight and improve CEs effectiveness.

Statement of the Problem

There are few studies that compare course evaluation participation between degree levels of education. CEs serve as a valuable tool for curriculum improvement and development, as well as faculty retention, salary and tenure appointments (Chen & Hoshower, 2003; Beran, Violato & Kline, 2007; Davidovitch & Soen, 2011). Student participation and meaningful input is critical in the success of course evaluations. Literature supports the importance of course evaluations, in addition to addressing issues of participation (Norris & Conn, 2005; Beran & Violato, 2009; Chen & Hoshower, 1998) and suggestions for improvement (Morrison, 2011; Avery, Bryant, Mathios, Kang & Bell, 2006; Crews & Curtis, 2011). Research findings indicate student participation is low (Chen & Hoshower, 2003 & 1998; Avery, Bryant, Mathios, Kang & Bell, 2006) even amidst advancing technology. Further research in participation through degree levels may provide a better understanding of factors that predict active participation.

This study was designed to answer the following research questions: (a) to estimate the awareness of health professional students on how CEs may be utilized; (b) to determine if health professional students feel that information obtained from CEs is utilized by faculty; (c) to determine if differences exist in participation of CEs by levels of degree; (d) to determine if health professional students prefer online or traditional methods of delivery of CEs.

Significance of the Study

Course Evaluations completed by students are commonly used to provide feedback on teacher effectiveness. Additionally, CEs are utilized to improve course style and layout, for administration to measure teaching effectiveness for tenure, promotion or

salary increase. Students also value CEs to aide in selection of courses and instructors (Davidovitch & Soen, 2011). The practice of CEs is commonly and widely used in educational settings; as student ratings are utilized as the main evaluation for teaching effectiveness (Chen & Hoshower, 1998). Research continues to examine the development and validity of CEs, the reliability/validity of student evaluations, teaching effectiveness, and the potential bias of student ratings. Studies have also examined level of motivation for participation in CEs (Denson, Loveday & Dalton, 2010; Beran, Violato, Kline & Frideres, 2009; Giesey, Chen & Hoshower, 2004). Student ratings are often the source used for course improvement, thus participation is critical. Student participation and factors that contribute to participation should be evaluated. This thesis will discuss constructs within course evaluation such as participation, factors affecting participation, and recommendations.

Further comparison studies between degree levels and participation may provide valuable insight on how CEs are implemented and distributed in regards to the health professions. The study supports the following National Dental Hygiene Research Agenda objective:

C. Professional Education and Development: Studies in this category are concerned with educational methods, curricula, students and faculty; recruitment and retention of students and faculty; and, promoting graduate education and career path options (American Dental Hygienists Association, 2007).

Overview of the Methodology

This study was a self-reported, quantitative descriptive study in which data was collected from health professional students at Eastern Washington University students, in

Spokane, Washington, to evaluate degree levels of participation. Sample was collected from Eastern Washington University's Health Science programs: Dental Hygiene, BSDH students; Communication Disorders, BSCD students (Nu=173); Communication Disorders Post Baccalaureate Certificate students (Nc=17); Dental Hygiene Masters, MSDH students; Masters Occupational Therapy, MSOT students (Nm=72); and Doctorate Physical Therapy, DPT; Doctorate of Dental Surgery, DDS students (Nd=108). An anonymous questionnaire asked a series of participation motivators and factors, using a 7-point Likert type scale. Open-comment questions were also asked. Students were informed of the study and purpose before asked to voluntarily complete the questionnaire.

Delimitations of the Study

The study sample was comprised of health professional students at EWU and does not represent a generalized population. Student's ages within programs were varied, in addition to gender. The Dental Hygiene program is predominately female. Ethnicity was also varied among the programs and does not reflect a true representation of a generalized population. Externships and community service were incorporated within each health science study, some programs utilize externships throughout degree completion; other programs have the final year of degree completion as a full-time externship. CEs participation may be affected by students on campus versus students in externships. Another delimitation of the study is the method of delivery. Each program utilizes various methods of delivery from traditional paper CEs, to online format, to entire class participation at a computer lab. Little is known about student participation in CEs and degree levels. This study will help gain some insight into this research gap.

Definition of Key Terms and Operational Definitions

Course Evaluation: The Merriam Webster Dictionary defines evaluation as "to determine the significance, worth, or condition of usually by careful appraisal and study" (Webster Online, 2012). For this study, the definition of course evaluations includes appraisal and study from Health Science Student's perspectives.

1st year students: indicates the first year of study within the major sought by students.

2nd year students: indicates the second year of study within the major sought by students.

3rd year students: indicates the third year of study within the major sought by students.

Student participation: The Merriam Webster Dictionary defines participation as "the state of being related to a larger whole" (Webster Online, 2012). To measure students participation in this study, a questionnaire was designed using current research findings, and was administered (Appendix B).

Feedback: The Merriam Webster Dictionary defines feedback as "the transmission of evaluative or corrective information about an action, event, or process to the original or controlling source" (Webster Online, 2012). To measure student feedback in this study, a self-designed survey, using current research findings, containing open-ended questions was administered.

Summary

The aim of this study was to evaluate student participation in CEs within degree levels in the Health Science Programs at Eastern Washington University. In addition, the

study aimed to evaluate if students feel feedback is utilized by faculty and whether online or traditional CEs delivery is preferred. Further comparison studies between degree levels and participation may provide valuable insight on how CEs are implemented and distributed.

Review of the Literature

Overview of Research

Purpose and use. Course Evaluations (CEs) by students are commonly used to provide feedback on teacher effectiveness, to improve course style and layout, for administration to measure teaching effectiveness for tenure, promotion, or salary increase, and inform students about selection of courses and instructors (Davidovitch & Soen, 2011; Beran, Violato, Kline & Fideres, 2005; Bowling, 2008; Chen, Gupta & Hoshower, 2004; Chen & Hoshower, 2003; Davidovitch & Soen, 2009; Denson, Loveday & Dalton, 2010). CEs are also referred to as student evaluations, student assessments or student ratings within the literature. Student assessment of courses by schools is also used in efforts to improve future instructor ratings in addition to accountability in higher education (Wolsoschuk, 2011; Beran & Rokosh, 2009). End-of-course CEs have been employed and widely used by institutions of higher education for most of this century and are not a new phenomenon (Avery, et. al, 2006; Beran, Violato, Kline & Fideres, 2009; Bowling, 2008). Data provided by CEs are utilized when making decisions within higher education that benefit students and faculty.

CEs are commonly and widely used in educational settings; as student ratings are utilized as the main evaluation for teaching effectiveness (Chen & Hoshower, 1998 & 2003, Davidovitch & Soen, 2006; Denson, Loveday & Dalton, 2010, Donnon, Delver & Beran, 2010). Chen & Howshower (1998 & 2003), Davidovitch & Soen (2006), Loveday & Daloton (2010), Donovan, Delver & Beran (2010) indicated research continues to examine the development, reliability, validity, potential bias and teaching

effectiveness of CEs. Student participation in CEs is low (Chen & Hoshower, 2004; Cohen-Schotanus, Schonrock-Adema, & Schmidt, 2010; Crews & Curtis, 2011). Low response rates may be of concern, as minimal feedback may not provide a true assessment of student population (Norris & Conn, 2005; Woloschuk, Coderre, Wright & McLaughlin, 2011). Low response rates have prompted research in motivation and value of student participation in CEs.

Student motivation and participation. Researchers have examined motivation of students to participate in CEs (Denson, Loveday & Dalton, 2010; Chen & Hoshower, 2003; Crews & Curtis, 2011; Norris & Conn, 2005). Because CEs are often the source for course improvement, participation is critical. Norris and Conn (2005) studied how simple and easy implemented strategies within CEs was associated with increased participation. In a two-part quantitative study, they sought to determine how low response rates actually were for CEs (in online courses), and to explore the effectiveness of a combination of very simple strategies for increasing response rates in both online and traditional CEs. Fifty of 85 instructors (59% response rate) at Northern Arizona University (NAU) participated in the first part of the study. A questionnaire was developed to determine patterns in instructors' answers, which were then compared with response data to identify any associations with higher or lower student participation in CEs. The second part of the study, asked instructors to implement simple strategies, such as: announcing to students when CEs would be available and notifying students simultaneously via email of the availability. Participating instructors in the study were also asked to implement a brief statement regarding the value of completing CEs, as well as instructions for doing so by a completion date. Additionally, participating instructors

were asked to remind students via email one week prior to end of course of the complete by date. The study sampled students at NAU from 39 courses in a variety of disciplines: Arts and Science, Business Administration, Education and Social and Behavioral Sciences. The number of students enrolled in the courses had an average of 24 students per course. Results indicated student participation increased with simple instructor reminder strategies. Denson, Loveday, & Dalton (2010) used a quantitative study with a 60,860 student participants representing 2,697 courses questioned a student's motivation to complete a CE by examining predictors of overall satisfaction of a course. They felt CEs primarily evaluate teacher instruction and the goal of CEs should be to provide a process of improving courses and teaching. Denson *et.al*, studied overall student satisfaction of a course in relation to characteristics and reasons for enrolling in the course. Findings indicated overall course satisfaction improved student participation in CEs. "Students are rarely asked to assess their own learning" (Denson, Loveday & Dalton, p. 340, ¶2).

Chen and Hoshower (2003) addressed student motivation to complete CEs by Expectancy Theory. Expectancy theory is a well-researched model (developed by Vroom, 1964) that has successfully predicted behavior in a variety of contexts. Expectancy theory has served as a theoretical foundation for a large body of studies in psychology, organizational behavior and management accounting (Harrell et al., 1985; Brownell & McInnes, 1986; Hancock, 1995; Snead & Harrell, 1994; Geiger & Cooper, 1996). Expectancy models are cognitive explanations of human behavior that cast a person as an active, thinking, predicting person in their environment. A person evaluates outcomes of their behavior and assesses the likelihood that their actions will lead to

various outcomes. Expectancy theory indicates that effort (or participation in context to this thesis) is based on a systemic analysis of: 1) values of the rewards from outcomes; 2) likelihood that rewards will result from outcomes; 3) likelihood of reaching outcomes through a person's actions and efforts.

Using expectancy theory, Chen and Hoshower (1998, 2003, 2004) investigated the impact of potential uses of CEs upon students' motivation to participate in the CE process. They additionally investigated how an inappropriately designed CE may hinder students from providing meaningful feedback that affects their motivation to participate. The 2003 study was conducted at a mid-west university with 15,000 - 20,000 total enrollment. Freshman and Senior students were used in the study. Freshman participants were gathered from two sections of *Western Civilization,* which is primarily a Freshman course. Seniors were gathered from *Tier III* courses. Seniors are required to take a Tier III class before graduation. 208 usable instruments from the study were completed by 105 Freshman and 103 Senior students. A judgment exercise was administered to the participants. Individual focus expectancy theory suggests that tests of this theory should involve comparing measurements of the same individual's motivation under different circumstances (Harrell *et al.*, 1985; Murky & Frizzier, 1986). Chen and Hoshower incorporated a well-established individual focus methodology for their study. The methodology used in the study has been proven valid by other studies in literature (Snead & Harrell, 1995; Geiger & Cooper, 1996). Sixteen hypothetical situations were presented. Each student participant was asked to make two decisions. The first decision represented the overall attractiveness of participating in CEs, given the likelihood that outcomes would result from participation. The outcomes in the study were listed as: 1)

improving instructor teaching; 2) influencing instructor tenure, promotion, or salary rise; 3) improving course content and format; 4) making the results available to students.

The second decision reflected the strength of the student participant's motivation in CEs. Chen and Hoshower (2003) used the attractiveness of the evaluation obtained from the first decision, and the expectancy that if the participant placed an effort, he/she would be successful in providing meaningful or useful input into the CE process. Results from this study ranked student motivation as improving teacher instruction, followed by improving the course. Further, if students believed that teacher instruction and course could be improved based on feedback from CEs, students would be motivated to participate.

Crews and Curtis (2011) address factors of student motivation to participate in CE related to convenience, anonymity, and accessibility. They investigated the faculty perspective on an online CE method versus a traditional face-to-face. Motivation of students to participate in CEs based on ease, anonymity, and accessibility suggested movement toward online CEs. A survey was administered to convenience sample of 64 instructors. A response rate of 76.5% was received. 80% of the respondents agreed that explaining the purpose of CEs would result in higher student participation rates. Results from this study indicated the same response rates and participation in online and traditional formats. However, instructors (76%) responded that students provided increased comments with an online format. As noted in a previous study, higher participation was achieved when instructors implemented effective strategies such as reminders to complete CEs.

Factors Affecting Student Participation

Validity and reliability of CEs. Since heavy reliance on CE response are primarily used to evaluate instructor effectiveness, validity of CEs is concerning to faculty (Beran & Rokosh, 2009; Hassan, 2009). Beran and Rokosh (2009) investigated validity of CEs utilizing a qualitative analysis of (N=357) instructors' written responses. Results indicated that most instructors held negative views about CEs and use of CE results. Instructors felt the CEs used at the institution provided little or no assistance in instructional improvement, noting lack of written feedback from students. Problems noted by instructors in the study indicated (70%) poor design; (56%) procedural difficulties such as abuse by students, publishing results on the institution's website; (31%) myth-based issues such as students not qualified, popularity contests; (29%) ratings are biased based on course difficulty, class size, and student motivation; (30%) negative effect on instructors/instruction such as decreased morale or course standards may be compromised. Twenty-five percent of instructors felt CEs useful for improving teaching effectiveness. Strengths of CEs included (11%) high validity of ratings which identified good/weak instructors, student perceptions, and obtaining course information; (36%) high utility of ratings for formative and summative purposes; (4%) accountability of instructors; (9%) student representation allowing voice to the students and opportunity to express concerns; (10%) administration with ease of delivery and universal. Hassan (2009) studied faculty and student perspectives on substantive and consequential validity of CEs. The study developed two quantitative surveys (one for students, one for instructors) to identify intended and unintended consequences of using CEs. The study aimed to better understand the process used in participating in CEs and what faculty

members made of the results. The survey was distributed to undergraduate students and full-time instructors at the participating University. Ten percent (N=605) students participated and 50% (N=145) faculty participated. Investigation of the sample indicated the sample size was representative of class levels and faculty. Results indicated 70% of students perceive CEs to be a means for indicating suggestions for improvement 50% felt instructors value student input. More than half of instructors value input from students and make changes or improvements based on weaknesses identified by students on CEs, and perceive them as effective. Forty percent of instructors assert that what is addressed in class may be determined by content of ratings. Majority of faculty felt that difficulty in course load led to negative CEs.

Factors related to student ratings. Course loads of students and difficulty or ease of course content are concerns for negative response rates (Bowling, 2008; Darby, 2006). Bowling (2008) studied CEs of 9,855 professors employed at 79 different colleges. Bowling hypothesized and found that the relationship between course difficulty and perceived course quality were moderated by school academic rankings. Bowling further indicated that easiness ratings were strongly correlated with quality among lower ranked schools than among higher ranked schools. Ratings were collected from 79 colleges and institutions representing each of the four tiers used to classify national universities. Twenty-six were classified as tier I, 15 were classified as tier I, 15 at tier III, and 23 classified as tier IV. Forty-three institutions of the study were public and thirty-six were private. Additionally, the relationship between course difficulty and quality was slightly stronger among public schools than private. Bowling suggests the relationship

between course difficulty and CE participation may not be an accurate reflection of teaching performance.

Positive responses on CEs based on staff popularity, grade expectancy, elective versus required courses, and class ease may additionally be concerning (Remedios & Lieberman, 2008; Thornton, Adams & Sepehri, (2010). Ramedios and Lieberman (2008) surveyed (N=722) Psychology students with two 7-point Likert scale questionnaires prior to taking a course and after. Results indicated that perceived difficulty influenced CEs, however the influences were small (less than 1%). Studies have also indicated that grade-expectancy impact participation (Chen & Hoshower, 2003; Kulik, 2001). However, Thornton *et al.* (2010), investigated the belief that some instructors feel that if an instructor is an easy grader, has a low work load, or if the class is considered easy, he/she is more likely to receive favorable student CEs. The study utilized a sample of (N=80) Student Instruction Reports (SIR). SIR's are a product of the Educational Testing Service, which the study indicated has been used for 30 years and is a valid and reliable tool for measuring student learning (Centra, 2006). Results from the study indicated no support or evidence to support that overall CE is affected by grading or workload. Marsh and Roche (2000) address grading leniency and low workload, indicating such bias are unrelated to CEs. Davidovitch & Soen (2009) also investigated the link between expectancy of grades and course leniency, and also found no correlation between students' grades and high CEs feedback.

Education level. Student participation and factors that contribute to participation should be evaluated. CEs provide instructors with feedback for the purpose of improving teaching (Beran & Rokosh, 2009). There are few studies that evaluate how degree levels

of students affect participation, which warrants further investigation. Chen and Hoshower (2003) researched motivation and participation in CEs sampling freshman and seniors from an undergraduate Mid-West university. The study was conducted at the beginning of regularly scheduled freshman or senior class in the middle of the quarter. Students other than Freshman and Seniors were eliminated from the study, allowing 208 useable instruments (N=105 Freshman, N=103 Seniors). Their findings indicated that freshman students had higher regard of instructors and student-generated teaching, which is opposite of what was expected. T-tests were used to investigate the difference between Freshman and Seniors in student participation of CEs and outcomes for participation. Four outcomes were listed for participation: improvement of teaching; influencing teacher tenure, promotion, or salary raise; improving course content; and making results available to students. P values for the t-tests were 0.16 and 0.75 for the first three outcomes previously listed. A significant difference was found between grade levels in the last outcome. Freshman considered making results available to students more important than Seniors. Seniors considered tenure, promotion and salary raise more important than Freshman. Chen and Hoshower expected seniors engaged in specialized coursework staffed by professors would reflect higher evaluations of the professor. Their study indicated the opposite, which indicates a change may have happened with correlations of higher education level. The interpretation of the data suggests that Freshman may be seeking more guidance when choosing professors, and may not have knowledge on the promotion and tenure system relationship with CEs. Chen and Hoshower interpret the data suggesting that Seniors have increased knowledge of the

impact of CES on tenure and promotion system. This research will investigate student participation within CEs such as factors affecting participation and recommendations.

Related or Theoretical Frameworks and Supporting Research

Design. The design used to conduct CEs may offer insight in student participation (Cohen-Schotanus, Schonrock-Adema, & Schmidt, 2010; Fisher & Miller, 2008; Frick, Chadha, Watson & Zlatkovska 2009; Donovan, Mader & Shinsky, 2011). Traditionally, CEs are administered in a summative questionnaire format designed to measure teaching styles or behaviors (Clement, 2011; Beran, Violato & Kline, 2007; Denson, Loveday & Dalton, 2010.) The most common questionnaire style administered is the survey. Survey questions focus on quality of instructor, quality of readings, and overall summary measures, using a Likert-type scale; strongly agree - strongly disagree (Avery, Bryant, Mathois, Kang & Bell, 2006; Cohen-Schotanus, Schonrock-Adema & Schmidt, 2010; Davidovitch & Soen; 2009). Compulsory questions are also utilized for institutional purposes, addressing: background information and general opinions about the course, contributions of the course by the instructor, and general evaluation (Erdogan & Tuncer, 2009). Content of survey questions may also contain mandatory questions for cross-institutional comparisons, however, research shows optional questions are stronger predictors of overall satisfaction (Denson, Loveday & Dalton, 2009; Donovan, Mader & Shinsky, 2011).

Participation in CEs was found to be low (Cohen-Shotanus, Shonrock-Adema, J., & Schmidt, H., 2010). Studies indicate student motivation to participate in CEs is linked to convenience and ease (Geisey, Gen & Hoshower, 2004; Morrison, 2011; Norris & Conn, 2005). Advancements in technology have increased the ease of electronic and

online CEs administration (Crews & Curtis 2011; Morrison, 2011; Donovan, Mader & Shinksy 2010). Donovan, Mader, and Shinsky (2011) found higher return rates with traditional format versus online participation. The overall response rate was 80%. About half (48%) returned CEs online and 52% completed traditional CEs. Of the traditional evaluations, 83% returned forms compared to 76% who submitted online. Overall, more student participants in the study returned traditional CEs. Their study focused on method of delivery of CEs (online versus traditional) to verify the current research on return rate. The quantitative study contained a sample size *N*=519. Variables researched were open-ended responses based on analysis of the following factors: extent of responses (number, length, proportion of respondents), nature of responses (positive or negative), and usefulness of responses in improving instruction (formative or summative). Findings indicated little differences (.09 differences on a 5.0 scale) in quantitative results between traditional and online evaluations. However, results indicated participants completing online CEs had a higher response on open-ended responses with the online compared to traditional method by 27%.

Online versus traditional CEs. Similarly, Morrison (2011) conducted a study investigating online delivery methods of CEs. The study sampled business students (*N*=691) at a large university and randomly assigned students to a control group (*n*=342) which completed traditional format, and to an experimental group (*n*=349) which completed the same CEs with an online format. Analysis of variances was used to compare ratings, comments, and length of response rates of both groups. The study utilized an alpha .05 throughout the study, analysis of variance was used to determine whether the administration method was significantly related to CEs response rates.

Results were similar to the study conducted by Donovan, Mader, and Shinksy (2011) who studied response rates between online and traditional delivery methods. Morrison's study indicated an overall response rate of 59%, using paired sample *t*-test to assess the results. The difference between the two delivery methods were significantly different, $t(29) = 19.26$; $p < 0.01$, which indicated online CE participation was lower than traditional delivery. Both studies support other research (Donmeyer, *et al.*, 2004; Paolo, *et al.*, 2000; Liu, 2006) showing greater number and length in online comment responses. These findings indicated students who participated in online CEs, took the time to give detailed feedback (Avery, Bryant, Mathois, Kang, & Bell, 2006).

Mandatory versus voluntary student participation in CEs. There is recent debate between mandatory and voluntary participation in CEs within the research. Mandatory participation in CEs may question claims of student rights and free will. Retaliation is a concern, questioning refusal in participation or not treating the CEs with due seriousness by making comments in opposition to the mandatory nature; which may adversely affect instructor ratings (Davidovitch & Soen, 2011). Davidovitch and Soen (2011) investigated mandatory student participation in CEs, indicating the study was the first in the subject. The study questioned if mandatory participation may also be argued as coercion, and would adversely affect the authenticity of the ratings. They sought to investigate in CE ratings of instructors would differ significantly when participation was mandatory. A sample of (N=46,205) CEs from 2008/2009 academic year and CEs from 2009/2010 academic (N=103,164) were used for the study. The CEs focused around 534 instructors who taught the same 1,104 courses in both years to control for specific course and instructor effects. Differences were measured in students' ratings of the instructors,

course structure, instructor attitudes toward students, and instructor's encouragement to ask questions. Results from study findings show no significant differences found between ratings awarded to the participating instructors in the two academic years. Results also indicated no concern for retaliation against mandatory feedback. Twenty percent of students who viewed mandatory participation as an act of coercion in the study, completed partial CEs. Davadovitch and Soen believe the percentage of partially completed surveys is a strong indicator that the majority of students were persuaded by the importance of CEs and took the task seriously. The study also summarized when CE participation is mandatory, student's responses to CEs were still dictated by their beliefs and opinions. This may prompt universities to move toward mandatory CEs.

Studies conducted on low participation suggested additional research is indicated to evaluate student motivators and their perceptions of course evaluations (Chen & Hoshower, 2003). While literature demonstrated the convenience and ease of delivery of CEs, it showed no significant increase in participation, which is critical to gain feedback on teacher effectiveness.

Factors that Affect Participation

There is great consensus in the literature about the need for student motivation to participate in CEs. Studies indicated student perception of the value of CEs was a factor (Chen & Hoshower, 1998, Thornton, Adams & Sepheri, 2010, Desnon, Loveday & Dalton, 2010). Beran and Violato (2009) investigated student participation in CEs related to course characteristics and student engagement using a two-step analytic procedure with (*N*=371,131) student ratings over a three year period at a major Canadian university. The extent to which course characteristics and the level of engagement in the course

affected the instructor rating was investigated. Over the three year period of the study, there average response rate was 61%. Twelve items were constructed based on other published student-rating measures used in research including:

1. The overall quality of instruction
2. Student questions and comments were responded to appropriately
3. The course content was communicated with enthusiasm
4. Students were treated respectfully
5. Opportunities for course assistance were available
6. The course outline or other descriptive information provided enough detail about the course
7. The course as delivered followed the outline and the other course descriptive information
8. The course material was presented in a well-organized manner
9. The evaluation methods used for determining the course grade were fair
10. Students' work was graded in a reasonable amount of time
11. I learned a lot in this course
12. The support materials used in this course helped me to learn

A 7-point Likert response scale was used ranging from strongly disagree to strongly agree, with higher scores indicating a positive rating. The reliability coefficient of the twelve items was 0.92, indicating that the scale is internally consistent. The structure used for this study has been examined and utilized in previous studies and is considered to be an uni-dimensional measure of instruction (Beran & Violato, 2005). According to Beran and Violato (2009), increased stress levels indicated a less favorable

rating. Results indicated instruction in labs were given higher ratings than lectures, which may indicate a more hands-on approach is favored. Student course workload, required and elective courses also showed variations in favorable ratings. Beran and Violato (2009) indicated elective courses received higher ratings, than required courses. Difficulty in course workload had less favorable ratings.

In a similar study Thornton, Adams and Sepheri, (2010), also indicated lower ratings in CEs as students' course workload and course content difficulty increased. Marsh and Roche (2000) indicated students placed higher, overall value with increased workload. Using a construct validity approach, over a twelve year period (*N*=5,433), critically reviewing previous research and reanalyzing recently published data found positive ratings were given for increased challenge of the workload, which showed a positive and direct relationship. This relationship may indicate student appreciation for challenge, value in teaching, and time invested in the course. Greenwald (1996) speculated that,

> "*if students tend to choose courses taught by reputedly lenient instructors, then there can be an erosion of the difficulty level of courses as students oversubscribe high-grading, easy courses relative to lower-graded, more difficult courses. Further, students will likely respond to strict instructors with low ratings, which can put pressure on those instructors to shift toward greater leniency (p. 1214)*".

Woloschuk, *et al*. (2011) showed a relationship between student expectations of a grade and favorable CE scores. A cross-sectional observational study was conducted from a sample of first and second year medical students (*N*=625). Participation was

online and voluntary. Return rate was 61.2%, and the survey was closed before grades were released. The survey contained twenty-five items, five on the evaluation process, and twenty on course content and delivery. A 5-point Likert-type scale was utilized with responses ranging from strongly disagree "1" to strongly agree "5". Internal consistency was estimated by use of Cronbach's alpha ranging from .71 for basic science teaching and .88 for assessment of students. The relationship was assessed between individual factors and overall course rating using linear regression. The regression model also incorporated the interaction between the first year of study and second year of study. *P* value <.001 for assessment of students was 0.45 (0.37 - 0.53) for first year students and 0.77 (0.67 - 0.86) for second year students. *P* value <.002 for basic science teaching was .13 (0.05 - 0.21) for first year students. *P* value 1.0 for basic science teaching was 0.00 (-0.09 -0.09) for second year students. Results from this study indicated that student ratings on CEs is dominated by their perception of their assessment. Student's expectations of grades were placed as an additional factor for motivation to participate. Grade expectancy in exchange for favorable CE participation and ratings has been debated in the literature (Woloschuk, *et.al,* 2011; Wright, 2006; Thornton *et al.,* 2010; Remedios & Liebernam, 2008; Marsh & Roche, 2000; Davidovitch & Soen, 2009; Bowling, 2008).

Researchers suggested if students felt a favorable grade could be achieved in a course, higher ratings were given. (Beren & Violato, 2009, Marsh & Roche, 2000). Culver (2010) conducted a study of (*N*=320,557) CEs, investigating whether grades students expected in the course affected the overall satisfaction of the instructor, whether the student's quality of engagement in the course affected the overall evaluation of the

instructor, and whether students' quality of engagement moderates the relationship between expected grades and overall evaluation of the instructor. The dependent variable was student responses on a 4-point Likert-scale. Two independent variables in the study include the students' expected grade outcome and quality of student engagement. An analysis of variance (ANOVA) was conducted. Expected grades and quality of engagement were both statistically significant, [$F(3, 3061.28) = 1020.43$, $p<.01$, $F(2, 4882.72) = 2441.36$, $p<.01$] indicating that the relationship between overall rating given the instructor and the student's expected grade is moderated by the student's quality of engagement. Both variables are necessary to predict the overall evaluation of the instructor. Results in which results indicated "student engagement with course material significantly moderates the relationship between expected grades and overall rating of the instructor" p.334. This may reflect back to required courses versus elective courses. Does personal interest in a course indicate strength of student engagement? An inverse effect was also demonstrated if the grade expected was not received, ratings were low (Denson, Loveday & Dalton, 2010).

Other areas considered were class attendance and satisfaction. When students were engaged and attended class frequently, research indicated higher CE ratings were given (Beran & Violato, 2009). Denson, Loveday, and Dalton (2010) found course satisfaction also resulted in high CE ratings. Sample (N=60,860) selection for this study occurred during a full academic year with a semester schedule. Ten questions were used with the variable being overall course satisfaction. The independent variables were: student characteristics, reason for taking the course, and other course evaluation questions both required by the institution and optional questions. A regression analysis

was initially used on the overall sample with all courses combined, then a subsequent regression analysis was completed by student discipline. A 4-point Likert-type scale was used ranging from strongly disagree "1" to strongly agree "4". Using descriptive analysis, 45% enrolled in a course because it was a requirement. Nineteen percent indicated it was relevant to career choice. Nineteen percent indicated interest as a reason for enrolling for a course. Reputation of the course was 2%, and timing of the course availability was 5%. Satisfaction of the course was fairly high at 3.11 on the 4-point Likert scale. Results from the study focus on evaluation questions that predict course satisfaction, and faculty selected optional questions are strong predictors of overall satisfaction that compulsory questions. This may indicate that faculty are more in tune with students' needs and experiences. The optional questions developed by faculty may show more predictability of overall satisfaction.

Additionally, Fisher & Miller (2008) found motivation and lack of participation were highly linked to the timing of the delivery of CEs. Typically, CEs were given toward the end of a course prior to final exams. If students were unable to observe successful implementation or other effects from their feedback, participation in CEs decreased. It seemed the result carried a "why bother" mentality. (Frick, et al., 2010).

Fisher and Miller (2008) examined the need to ensure students believed their feedback was valued. Their study addressed the value of feedback. Students (N=1289) in the study were given mid-course CEs that were implemented before the course ended. A case study utilizing qualitative and quantitative data was used for the study. Two survey instruments were used to gain insight on student expectations. Qualitative analysis used n=130 random responses in the form of vignettes to illustrate to potential

efficacy of the instrument. Quantitative analysis examined and coded all student responses in the survey. The data captured was from the start and the middle of the semester. Significance was tested using the chi-squared statistic. Results indicated providing and developing a responsive and interactive approach to instruction during the course improved teaching, positively affected learning, and increased participation in CEs.

There is limited research about participation in CEs based on the gender and grade level of students. Results from a study (Chen and Hoshower, 1998), indicated no significance in participation in male and female students. There is debate whether female students participate more than males based on value (Darby, 2008). Chen and Hoshower (1998) also briefly addressed grade level in their study indicating no significance in participation within their cohorts of Junior and Senior Accounting students (N=92) and Junior and Senior students in majors other than accounting (N=*98)* undergraduate students. Although Chen and Hoshower supported current research, further research regarding the effect of student gender and grade level on participation on CEs for improvement is needed in order to gain more insight about motivation factors.

Problem as Developed from Theories and Research

Just as feedback is a critical element of CEs, providing timely feedback to students on assessment ratings is equally important (Fisher & Miller, 2008). Responding to student expectations and recommendations shows students their concerns and input are valued. There is extensive research on validity and reliability of CEs (Beran & Rokosh, 2009; Greenwald, 2002; Marsh & Roche, 2000; Beran, Violato, Kline & Frideres, 2005; Kulik, 2001). However, the value placed on CEs by students has shown gaps in research.

Fisher and Miller (2008) addressed the perceived value of formative feedback when presented mid-course, rather than summative feedback collected at the end of the course. They found a partnership approach to CEs increased student's perceptions of their value. Results showed mid-course feedback allowed for instructors to identify the elements of instruction that needed immediate attention, and address those concerns in a timely manner. This partnership between instructor and student approach using formative and summative evaluations improved student participation in CEs and demonstrated the instructors listened to student concerns and implemented suggested changes based on their early feedback, resulting in a higher CES response rate.

The idea of partnership between teachers and students using CEs was also studied by Giles, Martin, Bryce & Hendry, 2004. The group collaboration between instructors and students gained valuable experience in addition to project development processes. Louie *et al.* (1996) investigated a student-centered approach, and indicated such an approach may also increase value in students when participating in CEs. Research by Louie *et al.* (1996) stated CEs are limited because CEs are based on evaluating instructors within a lecture, teacher-based curriculum. Findings raise the issue that student-centered CEs can make a substantive contribution to evaluation and feedback that may in turn, improve education and learning. Chen and Hoshower (2003) recommended instructors place an example of course modification within the course syllabus. This example would serve as a visual for all students to see how feedback was successfully implemented. Additionally, they also maintained students who believed feedback resulted in implemented change, would be motivated to provide feedback. Results should be made public, enhancing transparency by having clear purposes and uses of the CEs

system (Hassan, 2009). Chen & Hoshower (1998) also agree on publicizing student recommendations by utilizing student senate, newspaper, or a University website. "Few studies have attempted to analyze factors that influences students' attitudes toward teaching evaluations and the relative importance's of these factors or examined the behavioral intention of students participating in the evaluation" (Chen & Hoshower, 2003, p. 83). In support of value, Clement (2011) also addresses early feedback. Clement (2011) recommended attaching questions with the first exam of the course to collect early formative feedback. Early feedback regarding perceived value enables the instructor to modify instruction to meet student learning needs (Miller & Fisher 2008).

Student participation and motivators for participation in CEs is also addressed in literature. Recommendations for increasing participation percentages discuss mandatory participation versus voluntary participation (Davidovitch & Soen, 2011). The concern that Mandatory participation may negatively affect the authenticity of student responses was refuted in recent research (Davidovitch & Soen, 2011). The study was conducted over a two year academic calendar with a large sample size of CEs (N=149,369). Results also indicated student responses were still directed by opinion and self belief even when mandatory. There are gaps in the literature regarding student value of CEs and participation within education levels.

Summary

There is consensus in the literature supporting the importance and purpose of CEs. Continued research about factors which motivate and encourage students to participate may prove valuable. Historically, course evaluations have been utilized by educational institutions to gain feedback from students regarding their learning

experiences and to offer suggestions to instructors for modifications. In addition, course evaluations are also used by administration for salary increase, promotions, and tenure. In today's world of technology, course evaluations have moved from a traditional paper questionnaire method to online methods. Overall, participation from students in course evaluations is low. Research adds insight as to why student participation is low. Feedback from students is critical. Literature provides some understanding of motivation factors to gain student participation. Little is known about how a students' degree level affects participation. There is limited literature on other factors that may contribute to student participation in CEs such as grade level, degree sought, and education level, that may benefit from further study. Further study within variables of degree level may give more insight on motivation factors for participation and value.

Methods

Design

Overview of study. The purpose of this study was to investigate student participation in CEs. CEs by students are commonly used to provide feedback on teacher effectiveness, to improve course style and layout, for administration to measure teaching effectiveness for tenure, promotion, retention, or salary increase, and inform students about selection of courses and instructors (Davidovitch & Soen, 2011; Beran, Violato, Kline & Fideres, 2005; Bowling, 2008; Chen, Gupta & Hoshower, 2004; Chen & Hoshower, 2003; Davidovitch & Soen, 2009; Denson, Loveday & Dalton, 2010). CEs have been employed widely by institutions of higher education for most of this century (Avery, et. al, 2006; Beran, Violato, Kline & Fideres, 2009; Bowling, 2008). Data provided by CEs are utilized when making decisions within higher education to benefit students and faculty.

Problem or research questions. This study was designed to address the following research objectives: (a) to determine health professional students' awareness of how CEs may be utilized; (b) to determine if health professional students believe information obtained from CEs is utilized by faculty and administrators; (c) to determine if differences exist in participation of CEs by levels of degree; and (d) to determine if health professional students prefer online or traditional methods of delivery of CEs.

Variables. The research variables included were health profession science students' program of study, the simultaneous (in classroom) completion of online or traditional CEs, level of education and year within program of study, gender of student,

and the possibility of absences due to community externships. Variables related to use of CEs include: tenure, promotion, retention and salary increase of faculty. Demographic variables in the questionnaire were collected. Gender, age, course of study, and year (1st, 2nd, 3rd) within course of study were collected and analyzed to describe the sample and to combine similar groups for comparisons. Some health professional students take courses online and were not present on campus or in the classroom. This factor was considered in the extraneous variables. Community externships/absences had various levels of control, and were included in the study. A pre-arranged scheduled time when such students were on campus was arranged to allow students to participate in study. Response rate was expected to be high as collection of data was obtained on the same day of research with informed consent and pre-arranged scheduled time for classroom use and time for completion. There was no expected financial burden or discomfort to students from the study. The health professional students were in distinct discipline-based cohorts and have the same professors throughout the entire term which controlled for variability

Research method or design. This study was a self-reported, quantitative descriptive study in which data was collected from Eastern Washington University health profession students, in Spokane, Washington. Descriptive study designs are used to gain more information about characteristics within a particular subject or field (Burns & Grove, 2009). In the first phase, a letter introducing and explaining the study was sent to EWU Health Science Department Chairs in Physical Therapy, Occupational Therapy, Communication Disorders, Dental Surgery, and Dental Hygiene. Communication between the Principal Investigator (PI) and Department Chairs arranged for distribution of questionnaires to all health profession students who were asked to participate in the

study. The second phase included contacting each professor and asking for time in their courses to conduct the study. During the third phase, each student was asked to complete the questionnaire. At this stage the respondents were informed of the PI's background; purpose of study; and how they were selected for the study. In addition respondents were assured of anonymity, and the lack of potential harm before they were asked to participate. The PI read the respondent information from a script in the same manner to all participating cohorts. Participants were offered to receive the results of the study when completed.

Description of Setting

This descriptive study determined students' awareness of how CEs may be utilized, if they understand how feedback from CEs is utilized by faculty and departments, if awareness and understanding of the use of CEs differs with increased levels of degree, and if there is a preference of online or traditional methods of CEs. The educational setting was located at the Riverpoint campus in Spokane, Washington. Health science majors within the campus enroll an average of 350 students annually and provide numerous health services throughout the Eastern Washington community. EWU is an accredited university and all health science programs are accredited by their respective professional accrediting bodies.

The participants and location were a convenience sample, which positively and negatively affected the generalization of the outcome. The use of this convenience sample was representative of past and future health professionals at EWU. Admission criteria are not likely to change in the future indicating similar enrollment from past classes. The use of the location resulted in favorable participation. EWU is an

educational facility which places high priority on CEs for educational and administrative purposes.

Sample

Human subjects protection. Institutional Review Board (IRB) approval was obtained from EWU prior to research (Appendix A). All participants were provided with an information letter (Appendix B) explaining the PI's background, purpose of the study, reassurance of anonymity, and an opportunity to decline participation in or during commencement of the study.

A raw data master list of actual completed questionnaires was kept electronically on a password-protected computer and a backup copy was kept on a USB stick which was kept in a fire-safe box located at the PI's residence. Only summary results were shared. Subjects were all provided with the name and email contact information of the PI, and the supervising thesis committee chairperson.

The study had very minimal risk, with no financial, physical burden or discomfort.

Sample source. All participants were students at EWU enrolled in health science professions. See Table 1.

Table 1

Eastern Washington University Health Science Department Spring 2013

Health Science Program	Degree Sought	Year in coursework	Enrollment #'s
Physical Therapy, DPT	Doctorate	1st	38
		2nd	38
		3rd	43
		Total DPT	119
Dental Surgery, DDS	Doctorate	1st	8
		Total DDS	8
Occupational Therapy, MSOT	Masters	1st	32
		2nd	32
		Total MSOT	64
Communication Disorders, BSCD	Baccalaureate	Junior	40
		Senior	28
Communication Disorders	Post-Baccalaureate Certificate	One year post BS	10-17
Communication Disorders, MSCD	Masters	1st	33
		2nd	25
		Total CD	143
Dental Hygiene, BSDH	Baccalaureate	1st	36
		2nd	33
		3rd	37
		Total BSDH	105
Dental Hygiene, MSDH	Masters	1st	8

Source: EWU Department Chairs, 2012

Criteria for sample selection. Inclusion in and exclusion from the study were determined by enrollment at EWU. Exclusion criteria included enrollment outside of EWU Health Science Professions during the 2012 - 2013 academic year. Inclusion criteria included:

- Full-Time status, 12 - 15 credits (on-line and face-to-face)
- Enrolled in Health Science Profession
- Coursework includes both didactic and clinical
- Active enrollment in 2012 - 2013 academic year

Sampling plan. Subjects were chosen by convenience sampling. Subjects were included in the study because they were all health professional students at EWU. Convenience samples provide means to research subjects or topics that may not be able to be examined through probability sampling (Burns & Grove, 2009).

Sample size. A minimum sample size of 246 health professional students was needed for 95% confidence and error within 0.75. If a larger sample size is obtained, this would result in less error at the same level of confidence. There were a total of 330 participants (N=330) in the study.

Data Collection

Methods. Data collection performed by the PI was self-reported. The questionnaire consisted of four demographic questions, eleven Likert-type questions about CE knowledge and use, and two open ended questions/comments. Questionnaires were distributed by the PI at an EWU Riverpoint campus classroom that was assigned. Graduate students in the Dental Hygiene program and resident students in the 3rd year Physical Therapy program were emailed the questionnaire using SnapSurveys® and

emailing them with a link assuring anonymity. These students were not on campus traditionally, as courses were mainly on line. Questionnaires that are to be completed by participants will be collected and evaluated by PI for inclusion and exclusion from the study.

Instruments. The questionnaire consisted of five demographic questions including gender, health science profession, degree sought, credit status, and year in program (Appendix D). Eleven Likert type 7-point scale questions were used to determine awareness and understanding of how CEs are used; to determine if students understand how information obtained in CEs is being utilized by faculty and departments; if differences exist between awareness and understanding of CEs by level of education, and if online was preferred over traditional method of CEs delivery (Appendix D). The top of the questionnaire was used only for tracking data, no research was conducted on lab, didactic or clinical courses.

Reliability and validity. Evaluation of survey instrument to determine reliability and validity was achieved through appraisal by thesis committee members and all graduate faculty in the dental hygiene program, as well as the four Department Chairs from the health science programs. The thesis committee was comprised in part by dental hygiene educators who hold Master's degrees, and an applied statistics educator who holds a Doctorate degree, all members are well-versed on CE concepts.

The questionnaire was presented and pretested on a sample of dental hygiene program alumni and feedback was incorporated into the final questionnaire to minimize question wording ambiguity and response bias (Cooper & Schindler, 2011). The questions were deemed to possess face and content validity by the PI and thesis

committee members (Zikmund, Babin, Carr & Griffin, 2010). Face validity of the measures was established by the agreement between the PI and thesis members in that the questions and scales logically reflected the concepts being measured. Further, the PI and thesis committee members determined the measures included in the questionnaire cover the domain of interest and thus meet content validity. Because the sample was a distinct cohort of health professional students from one university, there was limited external validity.

Procedure. Each potential subject was enrolled full time (12 - 15 credits), in both didactic and clinical courses at EWU. Each subject was also enrolled in one of the following health science majors: Physical Therapy (PT), Occupational Therapy (OT), Communication Disorders (CD), or Dental Hygiene (DH) or Dental Surgery (DDS). Each student was also in the process of pursing a Baccalaureate, Post Baccalaureate Certificate, Masters or Doctorate degree.

Fifteen minutes of classroom time was pre-arranged with Department Chairs and faculty from the Health Sciences. The principal investigator was given an appointed classroom and time to conduct research. Data was collected during spring 2013. The arranged time was planned to occur shortly after when CEs were traditionally given with each program, after quarter finals, when student expectation of CEs was existing. Current CEs used by all programs consist of less than eight questions, and thus should not fatigue respondents given the study questionnaire would distributed around the same time CEs are usually given.

The PI introduced herself and gave background information. The class instructor was not in the classroom in order to diminish bias from an offhand comment. The

purpose of the study was explained, as was the rationale for participant selection. The PI encouraged students to give honest feedback, and informed students of the opportunity to opt out (Appendix B). A script was read for each introduction in the study (Appendix C). Respondents were assured of no financial burden or discomfort. Students were given an opportunity to ask questions concerning the research, and were assured of no potential harm due to participation. Written consent forms containing purpose, primary investigator background, and methodology were handed out. Copies of the participation form were also made available upon request. Verbal instructions were given to participants by the PI using a standard script presentation. Students were again be assured of anonymity and reminded not to put any identifying marks on the survey instrument.

After all questions concerning the study had been addressed, students who agreed to participate were handed a questionnaire (Appendix D). The questionnaire contains five demographic questions including: gender, health science major, degree sought, credit status, and year in the program.

A 7-point Likert type scale survey as well as two open-ended questions were included in the questionnaire. After all questionnaires were turned in, students were thanked for their participation and time with a selection of a cookie. Department Professors who granted permission for use of classroom time for this research were given a gift card to a local coffee shop in appreciation for their support, availability of students, classroom time and use.

Upon completion of all questionnaires by students in each cohort, the PI collected all materials, confirmed manila envelopes were sealed and placed all data in a fire safe

box at her residence. Data was entered on an Excel sheet on a password protected computer after all questionnaires were completed.

Statistical Analysis

Comparison by statistical analysis was completed to determine if students feel information obtained in CEs is utilized. Additional statistical analyses investigated comparisons of the research variables by demographic variables. the relationship between participation and graduate level, and if traditional was preferred over online methods of delivery. Summary statistics, including means, standard deviations, medians, and frequencies were used to describe and summarize the respondents and the responses. Confidence intervals were used to estimate awareness and understanding for the eleven questions on CEs: do health professional students believe and understand that information obtained from CEs is utilized by faculty, and to determine health professional students' awareness of how CEs may be utilized. One-way analysis of variance tests were used to compare responses relative to the third and fourth research questions: to determine if differences exist in importance of CEs by level of education; and to determine if health professional students prefer online or traditional methods of CE delivery. Two-sample T-tests were used to compare responses by gender.

Summary

This quantitative descriptive study was self-reported in which data was collected from Health Science Profession students. A questionnaire was used to investigate if students not only knew how CEs may be utilized, but if they felt that feedback given in CEs was utilized, if participation in CEs increases with increased level of degree, and if traditional methods of delivery are preferred. After statistical analysis, predictions on

participation based on educational level, preference, and implemented feedback may offer insight regarding student motivation to complete CEs.

Results

Introduction

This study was designed to determine: (a) health professional students' awareness of how CEs are utilized; (b) if health professional students believe information obtained from CEs is utilized by faculty and administrators; (c) if differences exist in participation of CEs by degree levels; and (d) if health professional students prefer online or traditional methods of delivery of CEs. This chapter presents the results of this study organized according to these four research questions.

Description of Sample

This study was a self-reported, quantitative descriptive study in which data was collected from health profession students enrolled at EWU, in Spokane, Washington. A convenience sample was selected because the researcher was a part-time clinical faculty member at EWU and had access to a group of students representative of past and future health professional students at EWU. Admission criteria are not likely to change in the future indicating similar enrollment from past classes. This method of sampling resulted in favorable participation. All participating students were matriculated in the following health science programs: Physical Therapy, Occupational Therapy, Communication Disorders, Dental Hygiene, and Dental Science. Health science programs within the campus enroll an average of 350 students annually. The primary investigator recruited and enrolled health professional students (N=330) during their lecture classes at EWU resulting in 94% participation. EWU is an educational facility that places high priority on CEs for educational and administrative purposes.

Statistical Analysis

Data was collected using a questionnaire with a Likert-type scale. The questionnaire was pre-tested, and edited prior to implementing into the study. Information from pre-testing was used to make changes in the final questionnaire. Part one of the questionnaire was demographic in nature. Part two of the questionnaire asked questions to determine if students felt information obtained in CEs was utilized. Additional statistical analyses investigated relationships between students' participation and degree ranks and if traditional CEs were preferred over online methods of delivery. Summary statistics, including: means, standard deviations, and frequencies were used to describe and summarize the respondents and their responses. Confidence intervals were used to estimate awareness and understanding for the 11 Likert-type questions on CEs, addressing the first two research questions: Are health professional students aware of how CEs are utilized, and do health professional students believe and understand information obtained from CEs is utilized by faculty and administrators? Confidence intervals (CI) were used to estimate the mean ratings for questions relating to CEs. Students indicated they understood purpose of CEs 95% CI [5.75, 6.00], and had purpose of CEs explained to them 95% CI [5.47, 5.76]. Respondents generally felt feedback from CEs is used by instructors 95% CI [4.07, 4.42]. One-way analysis of variance tests (or non-parametric analog) were used to compare responses relative to the third and fourth research questions: Do differences exist in importance of CEs by level of degree; and do health professional students prefer online or traditional methods of CE delivery? Two-sample *t*-tests (or the non-parametric analog) will be used to compare responses by gender.

Through quantitative analysis, the number of responses for each item was tallied. A statistician from EWU was recruited to assist with the statistical analysis on a complimentary basis. The random code assigned to each questionnaire remained the same to enable the identification of a comparison for course of study, gender, and year in program. This statistical test is the most common correlation measure and requires a linear relationship between variables (Burns & Grove, 2009).

Part three of the questionnaire had two open-comment questions. Students' comments on belief if more years of education increase student participation and if they feel feedback from CEs is utilized by faculty were categorized by common themes. The responses were assigned a category and reviewed for major themes. From the major themes, the PI identified patterns and trends.

A total of 330 study subjects participated. The research variables were: health profession science students and their program of study; the simultaneous (in classroom) completion of online or traditional CEs; level of education and year within program of study; gender of student; and the possibility of absences due to community externships. Student credit status was also considered, as some graduate students are enrolled in on-line courses, in addition to participating in externships off campus. Data collection revealed less than 2% of participants indicated part-time credit status, and was not significant enough for statistical analysis comparisons. Variables related to use of CEs included: tenure, promotion, retention, and salary increase of faculty. Demographic variables in the questionnaire were collected. Gender, age, course of study, and year (1st, 2nd, 3rd) within course of study were gathered and analyzed to describe the sample and

determine generalization of research results. Detailed information regarding coding of variables is illustrated in Tables 2 and 3.

Table 2

Summary of Demographics from Questionnaire

	Variables	
Demographics	Measure	Codes
Program of Study	Categorical	1 - PT 2 - OT 3 - CD 4 - DH 5 - DDS
Degree Sought	Categorical	1 – Doctorate 2 - Masters 3 - Professional Certificate 4 - Baccalaureate
Student Credit Status	Categorical	1 - Full Time 2 - Part Time
Year in Program	Categorical	1 - 1st year 2 - 2nd year 3 - 3rd year
Gender	Categorical	1 – Female 2 - Male

Table 3

Summary of Variables from Questionnaire

Likert-type Questions	Measure	Codes
I prefer paper CEs instead of online CEs.	Numerical	1 - Strongly Disagree 4 - No preference 7 - Strongly Agree
The purpose has been explained to me.	Numerical	1 - Strongly Disagree 4 - No preference 7 - Strongly Agree
I understand the purpose of CE.	Numerical	1 - Strongly Disagree 4 - No preference 7 - Strongly Agree
I believe feedback obtained from CE is implemented into courses and curriculum.	Numerical	1 - Strongly Disagree 4 - No preference 7 - Strongly Agree
I believe Masters students take participation in CE more seriously than undergrad students.	Numerical	1 - Strongly Disagree 4 - No preference 7 - Strongly Agree
I believe Doctorate students take participation in CE more seriously than Masters students.	Numerical	1 - Strongly Disagree 4 - No preference 7 - Strongly Agree
I am aware that CE are used for faculty (instructor) promotion decisions.	Numerical	1 - Strongly Disagree 4 - No preference 7 - Strongly Agree
I am aware that CE are used for faculty (instructor) tenure and retention decisions.	Numerical	1 - Strongly Disagree 4 - No preference 7 - Strongly Agree
I am aware that CE are used for faculty salary increases.	Numerical	1 - Strongly Disagree 4 - No preference 7 - Strongly Agree
I think CE should be done in the middle of the course and at the end.	Numerical	1 - Strongly Disagree 4 - No preference 7 - Strongly Agree
I am more likely to complete CE if I know I am going to get a high grade in the course.	Numerical	1 - Strongly Disagree 4 - No preference 7 - Strongly Agree

Respective professions for participants (N=330) included 22.12% (n=73) from PT, 18.79% (n=62) OT, 27.27% (n=90) CD, 29.39% (n=97) DH, and 2.42% (n=8) DDS. Twenty-five percent (n=84) of the students were seeking Doctorate degrees, 29.97% (n=98) Masters degrees, 42.81% (n=140) undergraduate degrees, and 1.53% (n=5) Professional Certificates, making comparisons for this degree sought not possible.

Student part-time credit status was 1.82% (*n*=6) which also had too few respondents for statistical comparison. Fifty-one percent (*n*=168) were enrolled in their 1st year of their program, 36% (*n*=120) were enrolled in their 2nd year of their program, and 12% (*n*=41) were enrolled in their 3rd year. Participants reported gender as 81.65% (*n*=258) female and 18.35% (*n*=58) male. Detailed demographics are in Table 4.

Table 4

Descriptive Statistics of EWU Health Professional Students

Variable	Count (*n*)	Percentage (%)
Program of Study		
PT	73	22.12
OT	62	18.79
CD	90	27.27
DH	97	29.39
DDS	8	2.42
Degree Sought		
Doctorate	84	25.69
Masters	98	29.97
Professional Certificate	5	1.53
Baccalaureate	140	42.81
Student Credit Status		
Full-Time	322	97.87
Part-Time	6	1.82
Year in Program		
1st Year	168	51.06
2nd Year	120	36.47
3rd Year	41	12.4
Gender		
Female	258	81.65
Male	58	18.35

Health professional students' awareness. The first research objective was to determine health professional students' awareness of how CEs may be utilized. This research question was addressed using a CI 95%. Confidence intervals are referred to the

probability of including the value of the parameter within the interval estimate (Burns & Grove, 2009). To address awareness of CE utilization, participants were asked a series of Likert-type questions from understanding purpose, if feedback was implemented, and CE use in faculty (instructor) retention, promotion, tenure, and salary (see Table 5). When asked if students understood the purpose of CEs, results showed most students understood purpose. Means (with standard deviations in parenthesis) showed 5.8 (5.7, 6.0) for understanding CEs purpose. Results indicated health professional students felt feedback from CEs are implemented into course curriculum and instruction (4.0, 4.4).

However, open-comment feedback from students regarding implementation of change in course curriculum and instruction varied. Common themes indicated 23% (*n*=74) of students did not believe feedback from CEs was implemented. Students were optimistic of change based on the belief that 16.2% (*n*=52) believed change depended on the instructor, and if that instructor was willing to implement change. Additionally, 9% (n=29) felt feedback was sometimes used, and 7.5% (n=24) were uncertain if feedback was used.

Table 5

Scale Variables

Variable	*n*	*M*	*SD*	*SE*	*95% CI*
Paper CEs are preferred over online CE	330	3.93	1.97	0.10	[3.70, 4.10]
CE purpose has been explained	329	5.61	1.35	0.07	[5.46, 5.76]
CE purpose is understood	330	5.87	1.18	0.06	[5.74, 6.00]
Feedback from CE is believed to be implemented	330	4.24	1.61	0.08	[4.07, 4.41]
Masters students participate in CE more than Baccalaureate students	327	4.71	1.40	0.07	[4.55, 4.86]
Doctorate students participate in CE more than Masters students	328	4.21	1.30	0.07	[4.06, 4.35]
Aware Promotion decisions are used with CE	330	4.22	1.87	0.10	[4.02, 4.42]
Aware tenure and retention decisions are used with CE	330	4.25	1.80	0.09	[4.06, 4.45]
Aware salary decisions are used with CE	330	3.39	1.75	0.09	[3.20, 3.58]

Prefer CE in the middle and end of course	330	5.11	1.75	0.09	[4.92, 5.30]
High grade expectancy increases participation in CE	330	2.70	1.72	0.09	[2.51, 2.88]

The second research question was to determine if health professional students believe information obtained from CEs is utilized by faculty and administrators. Students belief in promotion of faculty with use of CE had a mean of 4.2 (4.0, 4.4) that suggests students were generally aware that CE are used to promote faculty. For faculty tenure and retention decisions, again, the mean was 4.2 (4.0, 4.4), which show students view tenure and retention decisions the same as promotion. Salary decisions for faculty utilizing CEs, however, resulted with a lower mean 3.3 (3.2, 3.5) revealing students may be unaware that salary may be determined by CE feedback.

Demographic variable: gender. Two-Sample *t*-Tests (see Table 6) were used to determine ratings on specific variables regarding CEs differed by gender. Results indicated some variables differed significantly by gender. Male students had higher agreement that CEs use has been explained than did females. Additionally results suggest significant difference ($p<0.021$) in male students who also felt purpose of CE was understood. There was very significant differences ($p<0.01$) in gender suggesting male students believe Masters degree level students participate in CEs more than undergraduate degree level students ($p=0.007$) than females. There was no significance by gender when asked if students felt feedback was implemented into courses and

curriculum. No significance was found in gender differences in other variables. Table 6 reports significances within gender.

Table 6

Comparisons Between Gender

Variable	*M*	*SD*	*t*	*df*	*P*
Explain CE					
Female	5.53	1.39	2.60	313	0.010**
Male	6.03	1.06			
Understand CE					
Female	5.79	1.23	2.32	314	0.021**
Male	6.19	0.96			
Masters CE					
Female	4.59	1.39	2.70	311	0.007***
Male	5.14	1.41			

Note: ***very significant ($p<0.01$); ** significant ($.01< p \leq .05$); * marginally significant ($.05< p \leq .1$)

Demographic variable: program of study. When investigating variable comparisons within program of study (see Table 7), a One-Way ANOVA was used to determine if average ratings on the variables of interest differed due to program of study. Post hoc analyses using Tukey-Kramer multiple comparison procedures determined which pairs of means were significantly different. Findings with significance within program of study were reported in Table 7. DH had a significantly lower mean (2.83) when comparing preference of paper CEs delivery to online delivery within departments, indicating a strong preference for online delivery methods. CD had a significantly higher mean (5.20) than all other departments, indicating a preference toward traditional paper method delivery of CEs, compared to PT and OT (4.00, 3.92 respectively).

When comparing between programs if CEs had been explained to students, PT had a significantly higher mean (6.11) than CD and DH. Physical Therapy and OT were not different (6.11 and 5.63 respectively). Occupational Therapy, CD, and DH means were not significantly different (5.63, 5.44, 5.41 respectively).

PT also had a significantly higher mean (6.34) than all other departments when comparing if the purpose of CE was understood. CD, OT and DH means were not significantly different from each other (5.82, 5.74, 5.63 respectively). PT also had a significantly higher mean (5.45) than OT, CT, and DH when comparing if feedback is implemented into courses and curriculum. OT, CD, and DH were not significantly different.

PT and OT were not significantly different (5.39, 5.11, respectively) from each other when comparing if participation in CEs increases between Masters degree students versus Baccalaureate degree students. However, both PT and OT were higher than CD and DH (5.39, 5.11 respectively). CD and DH means were not significantly different (4.51, 4.17) PT, CD, and OT were not significantly different from each other (4.45, 4.33, 4.15) when comparing participation in CEs between Doctorate students and Masters students. PT had significantly higher mean (4.45) than DH (3.94). CD, OT, and DH means were not significantly different from each other (4.33, 4.15, 3.94).

Table 7

Mean Ratings for Significant Variables by Program of Study

Program	Significant Variables*					
	Paper vs Online	CEs Explained	Understand CEs purpose	Feedback is utilized	Masters vs Bachelors	Doctorate vs Masters
PT	4.00 B (1.81) *n*=73	6.11 A (1.22) *n*=73	6.34 **A*** (1.06) *n*=73	5.45 **A*** (1.12) *n*=73	5.39 A (1.17) *n*=71	4.45 **A*** (1.32) *n*=73
OT	3.92 B (1.68) *n*=62	5.63 AB (1.01) *n*=62	5.74 B (0.75 *n*=62	4.27 B (1.62) *n*=62	5.11 A (1.31) *n*=62	4.15 AB (1.28) *n*=61
CD	5.20 **A*** (1.57) *n*=90	5.44 B (1.46) *n*=90	5.82 B (1.29) *n*=90	3.88 B (1.55) *n*=90	4.51 B (1.36) *n*=89	4.33 AB (1.30) *n*=89
DH	2.83 **C*** (1.88) *n*=97	5.41 B (1.45) *n*=96	5.63 B (1.33) *n*=97	3.83 B (1.49) *n*=97	4.17 B (1.40) *n*=97	3.94 **B*** (1.26) *n*=97

Note: SD are in ( ). All ratings used a 7-point scale where 1 = strongly disagree and 7 = strongly agree.
*For each column, means that do not share a letter are significantly different.

Level of degree. The third research objective determined if differences exist in importance of CEs by level of degree. When asked if students felt if level of education increased participation among degree level (refer to Table 6), students indicated a mean of 4.7 (4.5, 4.8) that participation increases among Masters students compared to undergraduate students. Respondents also denoted a slightly lower mean of 4.2 (4.0, 4.3) that Doctorate students participate more in CEs than Masters students.

Demographic variable: degree level. Additional statistical analysis using a One-Way ANOVA test and Tukey multiple comparisons were utilized (see Table 8) to explore how degree ranks affected the following variables: explanation of CEs, understanding CEs purpose, if feedback is implemented in courses and curriculum, if

Masters students participate in CEs more than undergraduate, and if Doctorate students participate in CEs more than Masters. Significant findings within degree levels are reported in Table 8.

Table 8

Mean Ratings for Variables by Degree Sought

Department	Significant Variables*			
	CEs Explained	Understand Purpose	Feedback Utilized	Masters vs Baccalaureate
Doctorate	6.04 **A***	6.35 **A***	5.17 **A***	5.25 A
	(1.29)	(1.02)	(1.45)	(1.28)
	n=83	*n*=83	*n*=83	*n*=81
Masters	5.45 B	5.69 B	4.09 B	5.09 A
	(1.23)	(0.97)	(1.59)	(1.30)
	n=98	*n*=98	*n*=98	*n*=98
Baccalaureate	5.50 B	5.70 B	3.81 B	4.11 **B***
	(1.44)	(1.35)	(1.51)	(1.31)
	n=139	*n*=140	*n*=140	*n*=139

Note: SD are in ( ). All ratings used a 7-point scale where 1 = strongly disagree and 7 = strongly agree.
* For each column, means that do not share a letter identifies statistically significant differences

When comparing degree levels and if CEs purpose was explained, Doctorate students had a significantly higher mean (6.04) than Baccalaureate or Masters students (5.50, 5.45). There was no significant difference between Masters and Baccalaureate students.

When comparing degree levels and understanding the purpose of CEs, Doctorate students, again, showed significantly higher mean (6.35) than baccalaureate or masters students (5.70, 5.69). There was no significance between masters and baccalaureate students.

Doctorate students had a significantly higher mean (5.17) than Baccalaureate or Masters Students (4.09, 3.81) when comparing feedback from CEs being implemented into courses and curriculum. Graduate level (Doctorate and Masters) students were not significantly different from each other (5.25, 5.09), but were both higher than Baccalaureate students (*M*=4.11) when asked if participation increases with Masters students compared to undergraduate students. When asked if Doctorate student participation increases in CEs than Masters students, there were no significant differences between means using the Tukey's method.

When comparing within degree levels, Doctorate and Masters students had a higher mean (5.25, 5.09) than Baccalaureate students (*M*=4.11) when determining if Masters students participate more in CEs than Baccalaureate students. Doctorate and Masters students agree the statement, "I believe Masters students participate in CE more seriously than undergraduate students", respectively point toward a true statement.

CEs delivery preference. The fourth research question determined if health professional students prefer online or traditional methods of delivery of CEs. Results indicated a mean of 3.96 (3.7, 4.1) where health profession students indicate a neutral preference when asked if paper method of delivery was preferred to prefer online methods of CEs delivery.

Demographic variable: year in program. Additional statistical analysis, using One-Way ANOVA tests (see Table 9) were used for comparisons between year in program and preference of online or paper delivery of CEs. Further comparisons within year in program indicated significance in variable of increased participation between

Masters and Baccalaureate degree ranks. No significance was found between other research variables and are not reported in Table 9.

Table 9

Mean Ratings for Variables by Year in Program

Year in Program	Significant Variables	
	Paper	Masters
1st Year	4.11 **A***	4.93 **A***
	(1.91)	(1.37)
	n=168	*n*=167
2nd Year	3.96 AB	4.56 AB
	(1.99)	(1.42)
	n=120	*n*=118
3rd Year	3.20 **B***	4.29 **B***
	(2.08)	(1.37)
	n=41	*n*=41

Note: SD are in ( ). All ratings used a 7-point scale where 1 = strongly disagree and 7 = strongly agree.
*For each column, means that do not share a letter indicates statistically significant difference

First year health profession students had significantly higher mean than third year students (4.11, 3.20), however first and second year student means are not significantly different (4.11, 3.96). Second year and third year students means are not significantly different (3.96, 3.20). Additionally, first year students had a significantly higher mean than third year students (4.93, 4.29). Again, first and second year students means are not significantly different (4.93, 4.56). Second and third year students means are also not significantly different (4.56, 4.30).

When comparing year in program among the other variables, a significant finding in first year students resulted when asked if Masters students participate in CEs more than Baccalaureate students.

Open-comment questions. Two open-comment questions were asked on the questionnaire. The first question asked participants if they felt more years in education increased or decreased participation in CEs. If they felt participation increased or decreased, participants were also asked to explain why. There was a high response rate of 98.9% (*n*=326) on both questions for all participants (*N*=330). Of the respondents (*n*=314), 67.2% (*n*=211)stated that participation increased with increased years in education. Twenty-five percent (*n*=53) stated participation decreased with more years of education. Five percent (*n*=17) did not know if participation increased or decreased, and 3.2% (*n*=10) felt participation in CEs remained the same no matter the years of education. Common themes emerged from the comments. Of the respondents who addressed the participation question, 28.4% (*n*=60) contributed the increase in participation due to an investment in time, finances, and value in pursuing an advanced degree. Students commented on how pursuing higher level degrees allowed health professional students to become more knowledgeable in evaluating their courses and instructors. Twenty-five percent (*n*=53) stated giving feedback to instructors was considered important for future course and curriculum changes. Participants also commented on how increasing their education was important to students, and pursing a higher level degree caused students to take education more seriously and care more. The belief that increased education was more important to the student had the same percentage of responses (11.4%, *n*=24) as taking their education more seriously and caring more. Eleven percent (10.9%, *n*=23) contributed the smaller class size/cohorts and having the same professors over a period of years contributed to increased participation in CEs.

The second open-comment question investigated if health professional students felt CEs improve course curriculum and instruction. Participants were also asked to explain why or why not. Of the respondents (*N*=330), 97.6% (*n*=322) participated in question two. Thirty-eight percent (*n*=124) feel CEs improved course curriculum and instruction. Approximately 23% (*n*=74) did not feel CEs improved course curriculum and instruction. Three percent (*n*=8) stated tenured professors did not implement changes suggested in CEs. Some students (16.2%, *n*=52) felt course and curriculum changes depended on the professor. Eight percent (*n*=24) did not know if CEs improve course curriculum and instruction. Nine percent (*n*=29) stated CEs "sometimes" improve course curriculum and instruction. Students (3.4%, *n*=11) also felt course curriculum and instruction could be improved if instructors took CEs seriously. See Table 10.

Table 10

Open Comment Answers

Open Comment Question	*Total Respondents*	% (*n*)	Belief
Question 1: Degree level increases/decreases participation in CEs	Respondents=314	67.2% (*n*=211)	Participation increases with degree level
	Respondents=314	25% (*n*=53)	Participation decreases with degree level
	Respondents=314	5% (*n*= 17)	Did not know
	Respondents=314	3% (*n*=10)	Stayed the same
	Respondents=211	28% (*n*=60)	Participation increases due to investment in time, value, and finances
	Respondents=211	25% (*n*=53)	Giving feedback is important in increasing participation in CEs

	Respondents=211	11% (*n*=24)	Contributed increase in CEs participation to taking degree more seriously
	Respondents=211	11% (*n*=24)	Contributed increase in CEs participation because students care more
	Respondents=211	11% (*n*=24)	Participation increases due to small cohorts and class size
Question 2: CEs improve course curriculum and instruction	Respondents=322	38% (*n*=124)	Believe CEs improve course curriculum and instruction
	Respondents=322	23% (*n*=74)	Do not believe CEs improve course curriculum and instruction
	Respondents=322	3% (*n*=8)	Do not believe tenured professors implement changes from CEs feedback
	Respondents=322	16% (*n*=52)	Believe changes depend on the professor
	Respondents=322	8% (*n*=24)	Do not know
	Respondents=322	9% (*n*=29)	Sometimes improve course curriculum and instruction
	Respondents=322	3% (*n*=11)	Believe improvements could be made if instructors took CEs more seriously

Summary

The results in this chapter suggest health profession students are somewhat aware of how CEs may be utilized. The belief that CEs have been explained to the students is higher than the mean, in addition to understanding the purpose of CE. Students are aware that retention, promotion, and tenure are variables that are utilized from CE. However, students' awareness of salary decisions was lower than the mean. Health professional students believe information obtained from CEs is utilized by faculty and administrators

as indicated with an above neutral response (*M*=4.2). Within program of study, PT held higher belief than other departments that feedback in CEs was utilized by faculty and administrators.

Participation differences in CEs between degree levels indicated participation in CEs does increase between Baccalaureate and Masters students. However, there was little difference between Masters and Doctorate students. Results also indicated graduate students (both Doctorate and Masters) were higher than Baccalaureate students when asked if participation in CEs increase between undergraduate and graduate studies. When determining if students prefer online or traditional delivery of CEs, results show the preference is online. A discussion of these findings follows in the next chapter.

Discussion

This chapter is organized according to the four related research questions: (a) to estimate the awareness of health professional students on how CEs may be utilized; (b) to determine if health professional students feel that information obtained from CEs is utilized by faculty; (c) to determine if differences exist in participation of CEs by levels of degree; (d) to determine if health professional students prefer online or traditional methods of delivery of CEs.

Summary of Major Findings

In regards to research question (a) health professional students are aware of how CEs may be utilized. Using a 7-point Likert-type scale, in which 4 indicated no preference or neutral, health professional students believe the use of CEs has been explained, and further agree CEs purpose is clearly understood. Health professional students are also aware of CEs use for tenure, promotion, and retention decisions. However, on the subject of faculty salary increases, students do not appear to be aware CEs are used for salary decisions. The average response was above neutral to research question (b), health profession students feel feedback from CEs is utilized by faculty. CEs are used to gain feedback from students to improve instruction and course curriculum. EWU health professional students believe feedback from CEs are utilized by faculty.

Regarding research question (c), differences exist within degree levels in health professional student participation in CEs. Results suggest health profession students prefer online methods of delivery for CEs, in reference to research question (d).

Significance

This study aids in filling a research gap in student participation in CEs. CEs completed by students are commonly used to provide feedback on teacher effectiveness. Additionally, CEs are utilized to improve course style and layout, and for administration to measure teaching effectiveness for tenure, promotion, or salary increase. The practice of CEs is commonly and widely used in educational settings. Research continues to examine the development of CEs. Studies have also examined level of motivation for participation in CEs. Student ratings are often the source used for course improvement, thus participation is critical. Student participation and factors that contribute to participation should be evaluated. Further comparison studies between degree levels and participation may provide valuable insight on how CEs are implemented and distributed in regards to health profession programs.

This study attempted to identify if degree levels are significant factors in regards to student participation in CEs, an area that has limited research. Results from this study suggested student participation increased simultaneously with increased degree levels. Student feedback also showed value in education varied between degree levels. Students in graduate degree levels indicated pursuing an advanced degree was a reflection of their increased value and personal investment in education. This increased investment may be more time, money, and personal sacrifice. This study suggests graduate students pursuing a health profession degree are more inclined to give feedback and participate in

CEs to improve course curriculum and instruction for future colleagues within their health profession.

Results from this study show baccalaureate students did not feel participation increased with degree rank, which may indicate their value of education is less than graduate students. This study adds another element on student participation in CEs. Addressing degree levels and motivation to participate in CEs may aid programs in implementation of appropriate changes in development and design of CEs. Baccalaureate program administrators may focus development of CEs to gain a clear understanding on CE use, especially the importance of student participation. Administrators of graduate studies may choose a more detailed approach when gaining feedback on instruction and course curriculum change.

Students in this study complete their degrees in small cohorts. EWU health profession students take courses with a small number of classmates and instructors. EWU health profession students have the same classmates and instructors throughout their degree completion. This study may lend some insight into how small cohorts such as health professions, may increase student participation in CEs.

Relationship to Previous Research

Looking at research question (a) health professional students were found to be aware of how CEs are utilized. This study agrees with literature that supports student awareness of CE use (Denson, Loveday & Dalton, 2010; Chen & Hoshower, 2003; Crews & Curtis, 2011; Norris & Conn, 2005). Students are motivated to participate in order to improve teacher instruction and course curriculum. This study found health professional students are motivated to participate to improve instruction and

curriculum. CEs are also used to make faculty salary, promotion, retention, and tenure decisions. Results from this study showed health professional students understand CEs use in faculty administrative decisions. Literature indicates students, as well as students in this study, were aware of CEs use for administrative positions use (Denson, Loveday & Dalton, 2010; Chen & Hoshower, 2003; Crews & Curtis, 2011; Norris & Conn, 2005). However, administrative decisions such as salary, resulted with low awareness among health profession students in this study. Literature ranks importance of CEs use by students (Chen & Hoshower, 2003). Instructor and curriculum improvement were considered high importance compared to administrative decisions regarding faculty holding less priority. Health profession students in this study agree and are aware instructor and course improvement can be accomplished with CEs. The results of this study also agreed with literature, demonstrating instructor and course improvement holding high priority with health profession students (Chen & Hoshower, 2003). Awareness of administrative uses with CEs showed results of lower awareness with health profession students, which may indicate low priority for CEs use. Understanding CEs use initiates beginning steps of a change process.

Research question (b) attempted to determine if health professional students feel that information obtained from CEs is utilized by faculty. Research is conflicting when investigating if students feel CEs are utilized by faculty (Fisher & Miller, 2008; Frick, et al., 2010). Variables such as length of instruction, staff popularity, course ease, and grade expectancy are discussed (Denson, Loveday & Dalton, 2010; Thornton, Adams & Sepehri, 2010). Validity of CEs is questioned with such variables (Avery, et. al, 2006; Beran, Violato, Kline & Fideres, 2009; Bowling, 2008). Health profession students in

this study did believe information obtained in CEs is used by faculty. However, similar to the literature, open-comment results were varied (Norris & Conn, 2005; Woloschuk, Coderre, Wright & McLaughlin, 2011). Health profession students commented on utilization of feedback on CEs being dependent on the length of time the instructor has taught, if the instructor was tenured, and willing to change. Respondents had similar opinions as those in the literature where health profession students do not believe high grade expectancy affects participation in CEs (Chen & Howshower, 1998 & 2003; Bowling, 2008; Darby, 2006). Participation in CEs may be low due to the lack of implementation of feedback. If students believe changes were not implemented due to the instructor's length of teaching, tenure position, and reluctance for change, participation will remain low. Health profession students indicated a belief that CEs are utilized by faculty, which may suggest health profession instructors are implementing changes for improvement.

Research question (c) investigated differences in participation of CEs by degree levels. Literature provides some understanding of motivation factors to increase student participation in CEs (Davidovitch & Soen, 2009; Kulik, 2001; Chen & Howshwer, 2003). How degree level affects participation in CEs is a research gap. Literature demonstrates little in this subject area of degree level, degree sought, and education level. In this study, Doctorate and Masters students were not significantly different from each other when investigating increased participation in CEs between Masters and baccalaureate degree level students. However, both Doctorate and Masters students resulted with significantly higher results than baccalaureate students. This may indicate that once students reach a graduate level of education whether it be Masters or

Doctorate, participation is the same or possibly higher. Baccalaureate students' average responses were slightly above neutral which may suggest a lower perception in value of feedback on CEs.

Comments provided by the sample indicated increased years in education also increased value in education. For example, baccalaureate and Masters students did not have the same insight in value of education as compared to Doctorate students. This may be a sign that students seeking the highest level of degree, Doctorate, place higher value in their education than lesser degrees. A correlation between degree level and value is noted in this study. Results indicated Doctorate students had a significantly higher mean than baccalaureate or Masters students when the investigating whether CEs have been explained, suggesting Doctorate students believed purpose of CEs have been explained to them. Perhaps students' pursuit of the highest level of degree points to more experience in CEs therefore increased opportunities for explanation about the purpose and use of CEs. For this study the results were significantly high for PT students, a Doctorate program. Doctorate students also demonstrated a greater understanding of CE use than baccalaureate or masters, which suggests a possible relationship between higher level degree and critical thinking skills. When investigating if feedback was implemented for course curriculum and instructor improvement, Doctorate students in this study reported strong confidence in course and teacher improvement. This may be attributed to Doctorate degree health profession students viewing their instructors as colleagues. Additionally, these students may be more apt to give feedback to benefit future colleagues who will enter the profession. The results from this study supports increased

levels of education may increase participation in CEs because experience and understanding of CEs increases with higher degree levels.

Preference of online versus tradition formats was researched in question (d). Previous research suggests traditional delivery of CEs is preferred to online, although advancements in technology increase ease (Donovan, Mader & Shinsky, 2011). However, open-comment questions have shown increased participation with online format, which may suggest open comment feedback is easier with online format (Morrison, 2011). Online delivery formats may contribute to increased participation in CEs, as typing may be quicker than hand-written comments (Avery, Bryant, Mathois, Kang, & Bell, 2006).Additionally, females had increased participation in open comment feedback compared to males (Morrison, 2011; Donovan, Mader & Shinsky, 2011).

Results of this study differ from previous research. EWU health profession students prefer online delivery methods of CEs. Technology in the classroom is continually evolving how students participate in courses. Health professional students at EWU use various methods of technology in both classroom and when providing patient care. Health care providers are equipped to adapt to technology changes for ease, patient comfort, and treatment. Use of technology is common in health profession students at EWU that may explain preference to online delivery methods of CEs.

Timing of CEs delivery. This study also aimed to investigate how timing of CE delivery was preferred. Previous literature discussed how motivation is also affected by the timing of CEs delivery (Fisher & Miller, 2008). Changes in curriculum and instruction are difficult for students to observe, as traditionally most CEs occur at the end of a course. Motivation and lack of participation were highly linked to the timing of CEs

delivery (Fisher & Miller, 2008). When given toward the end of a course prior to final exams, students experience a disconnect with the course. If students are unable to observe successful implementation or other effect of their feedback, participation in CEs decreased. Often, the result carried a "why bother?" mentality, and further suggestions were not offered (Fisher & Miller, 2008). Studies indicate CEs given mid-term increased student participation in CEs (Denson, Loveday & Dalton, 2010; Chen & Hoshower, 2003; Fisher & Miller, 2008). Providing and developing a responsive and interactive approach to instruction during the course improved teaching, positively affected learning, and increased participation in CEs (Denson, Loveday & Dalton, 2010; Chen & Hoshower, 2003; Fisher & Miller, 2008). Similarly, findings with previous studies agreed with this study (Denson, Loveday & Dalton, 2010; Chen & Hoshower, 2003; Fisher & Miller, 2008).

Among EWU health profession students results implied students felt CEs should be distributed mid-course. Implementation of CEs mid-course in addition to end of course, enables students to witness improvements and modifications within a course or curriculum. Student feedback from CEs should be valued. Previous studies, including this study, reveal students believe CEs improve course curriculum and instruction (Denson, Loveday & Dalton, 2010; Chen & Hoshower, 2003; Fisher & Miller, 2008). Course changes and improvements cannot occur, unless administration and instructors are made aware of how students are doing. When asked if course curriculum and instruction improves with CEs, a baccalaureate student in the CD program stated, "Yes, but only if given at least in the middle of the course. If they are given just at the end, the professor doesn't have time to improve themselves for the class".

Traditionally, CEs are distributed at the end of a course. Often, instructors have course material pre-scheduled. Changes may be difficult to achieve with curriculum that is set in place. If instructors are open to adjustments in creating a learner-centered environment, mid-course evaluations may prove valuable. Students witness changes based on their feedback, and instructors will simultaneously observe if modifications are effective. Previous studies have indicated a partnership approach to student learning is valued by students (Fisher & Miller, 2008; Giles, Martin, Bryce & Hendry, 2004). Mid-course and end of course CEs will aid instructors, allowing students to give formative feedback during the course and summative feedback at the end.

Literature also indicates low participation due to the inability for students to observe changes based on feedback from CEs (Chen & Hoshower, 2003; Fisher & Miller, 2008). Students want to see changes that improve courses, and believe they are unable to verify changes if CEs are administered at course end. Students within this study strongly preferred mid-course delivery of CEs.

Grade expectancy. This study also investigated grade expectancy and participation in CEs. Research has investigated the belief some students have that if an instructor is an easy grader, has a low work load, or if the class is considered easy, he/she is more likely to receive favorable student CEs (Beren & Violato, 2009, Marsh & Roche, 2000). Findings within the literature indicate no correlation between high grade expectancy/low work load, favorable CE ratings, and increased participation (Marsh & Roche, 2000). This study addressed high grade expectancy and found results to be similar to literature (Woloschuk, *et.al,* 2011; Wright, 2006; Thornton *et al.,* 2010; Remedios & Liebernam, 2008; Marsh & Roche, 2000; Davidovitch & Soen, 2009;

Bowling, 2008). Health profession students strongly believe high grade expectancy does not affect participation in CEs. This study suggests health profession students' participation in CEs holds more value in course improvement and instruction than participating in CEs because they are expecting a high grade.

Additionally, student perception may differ from actual outcomes. This study suggests health professional students' participation in CEs does not increase if a high grade is expected. This may be related to perception, and real action may different.

Assumptions

Participation in study. Participation in this study was expected to be high because data was collected on the same day of research with informed consent and a pre-arranged scheduled time for classroom use and time for survey completion. Additionally, since the PI was a licensed health professional conducting the research, students in the study may have been more willing to participate in the study. Health profession students may place more value on research, and therefore may be more supportive of research endeavors. EWU health profession students employ research and evidence based practices in their courses.

Small cohorts and classroom size. EWU health profession students are unique from other professions' students, as they are enrolled in small cohorts, and have the same instructors throughout their degree completion. This sample study is not reflective of the general student population. Because of the intimacy and small cohorts of EWU health profession classes, increased participation in CEs was expected. Eleven percent of students within this study indicated increased participation in CEs because of the small cohorts and the relationships that are developed with instructors. EWU health profession

students who are enrolled in graduate programs view their instructors as future colleagues and want to give feedback to benefit future practitioners who will enter their field of practice. The intimacy of these cohorts may create an environment where students develop a collaborative relationship with instructors. An OT Masters student stated, "In graduate level courses, instructors see their students as peers and future practitioners, therefore they collaborate more on some assignments". Motivation factors within this study indicate within small cohorts relationships with the same instructors increases participation.

Open comment feedback from this study also indicated having same instructors compared to varied instructors (for example, in an undergraduate program) affects participation in CEs. Health professional students indicated having same instructors allowed them to become more familiar with instructor teaching styles, therefore allowing them to critique and give feedback to benefit instruction. A first year PT Doctorate student stated, "I learn what teaching styles help me more, and what would further assist me in learning and I can more effectively say that in CEs now, compared to CEs in my first years of undergrad".

Students in health professions are seeking degrees in which their instructors may be future colleagues. Having the same professors/instructors may also increase participation in CEs as students are more comfortable in expressing suggestions for course improvement and instruction. CEs feedback to implement improvements for future courses affects future health care providers. As noted earlier, 11% of respondents in this study indicated small class size, and having the same instructors influenced their participation in CEs. When asked about increased participation in CEs, a Masters OT

student replied, "Increase, you are more vested in education in a smaller class size. Closer relationships with instructors help give you ownership to the program as a whole".

Students pursing health profession degrees may be more dedicated to their choice of career and care about the education they are receiving as it carries into professional practice, in addition to affecting future health practitioners. Results from this study indicated PT students believed feedback in CEs was implemented by faculty and administration, more so than other programs in this study. Again, this may suggest a doctorate student is more invested in value of education. Open comment responses from PT students indicated that instructors communicate the importance of CEs and implement feedback from them. Compared to other programs in this study PT students had a higher understanding when asked the use and purpose of CEs. A first year Doctorate PT student replied, "I think more years (in education) increase participation. The more years someone participates in school usually means their education is important to them. Therefore, they would be more likely to do CEs for themselves and future students. With more experience comes better understanding of CEs". A resulting assertion is students who understand the importance, purpose, use, and future implementation of feedback from CEs communicated effectively to them, have increased response rates.

Degree levels. This study aimed to look at participation comparison between degree levels, assuming participation in CEs would increase with increased degree levels. EWU health profession students do believe degree levels effect student participation in CEs. When comparing participation increases between Doctorate and Masters degrees, students feel Doctorate students participate in CEs more than Masters students. Students believe Masters students participate in CEs more seriously than undergraduate students.

This study found participation is indeed influenced by degree levels. When investigating confounding variables of degree levels and program of study, PT students are Doctorate level degree, and OT are Masters level, both graduate levels. Program of study and degree level may indicate similar meaning.

Participants also addressed increased years in education and participation with an open-comment question. The majority of health professional students believe more years of education increase participation in CEs. Time, value, investment, and increased seriousness were common themes that emerged with increased years in education, thus impacting increased participation in CEs. A first year DDS student stated, "Typically higher education infers more respect between professor and student. The belief would be professors are more likely to listen to professional students than undergrad students". Another DDS student added, "More years of education increase participation in CE. Over the course of my education, I've been instructed on the importance of CE and realize that it actually positively impacts my education and the education of students after me. The more education I've had the more I value the time I spend in class and the information that I receive from my professors".

Explanations of Unanticipated Findings.

Student confidence in change and anonymity. Students revealed they were more motivated to fill out CEs if they felt the instructor would improve course curriculum and instruction from CEs feedback. In addition, a very small number responded "if" instructors would utilize CEs, they believed instruction and curriculum would improve. A common theme of low confidence in change developed in this study. Previous studies

indicated students are aware of CEs use and understanding. However, little is known about student confidence in course and instructor change and improvement.

Health profession students expressed motivation to participate in CEs "if" they felt instructors would implement suggestions given. Furthermore, health profession students indicated changes in improvement of course curriculum and instruction were dependent on the instructor and length of instruction. Very few participants indicated improvement in course curriculum and instruction did not improve if the instructor was tenured. A third year DH student stated, "Instructors that have tenure or have been employed for a long time, I feel that there is no improvement. In fact, most times the students are blamed for the problems." If students have low confidence in course improvement, participation in CEs may decrease. This statement may point to a correlation between length of teaching and motivation to improve curriculum, which warrants further investigation. Students understand CEs can be used for improvement, however, there is hesitation to offer feedback because confidence is low when considering if feedback would truly be implemented.

Anonymity is important to students. Identification of feedback may suggest why participation in CEs is low. Students in small cohorts, may fear handwritten feedback may be recognized. Students indicated low confidence with anonymity with online delivery, questioning, "how is it anonymous if the CE is sent to my email"? Fear of recognition may indicate students' hesitation in offering feedback in CEs.

In summary, one-third of health professional students within this study felt CEs improved course curriculum and instruction. These findings concur with the literature indicating improvement in course curriculum and instruction are important to students

(Avery, Bryant, Mathois, Kang & Bell, 2006; Cohen-Schotanus, Schonrock-Adema & Schmidt, 2010; Davidovitch & Soen; 2009). However, results of this study indicate that EWU health profession students would increase participation in CEs if they believed course curriculum and instructor improvement would truly occur. If EWU students believe change can occur, participation decrease in CEs was unanticipated based on student trust in implementation of change. Further investigation is warranted in researching why students' confidence in instructor and curriculum change is low. Students within this study indicate they believe CEs improve course curriculum and instruction, however, feedback in open comment questions indicate there are reasons that decrease students' confidence in change. EWU students explained their lack of participation in CEs related to the length of time an instructor has been teaching, if they are tenured, and their ability to be open-minded to constructive feedback.

Gender. Health professional students at EWU were almost 82% female. This may not be a true representation of a generalized population of degree levels. There is limited research about participation in CEs based on gender. There are conflicting results within literature that indicated no significance in participation in male and female students (Chen & Hoshower, 2003; Darby, 2008). There is debate whether female students participate more than males based on value. Research has shown that females respond more on open comment questions on CEs more than males (Chen & Hoshower, 2003). This may suggest that females are more expressive when wanting to give feedback to instructors. This study had significant findings based on gender and conflicted with previous research. Of the male respondents (n=58), there was 100% participation in open comment question number one, and 98.3% in open comment

question number two. Male health profession students felt CEs purpose was explained, and understand CEs purpose more than females. This cohort of male health profession students agreed participation increases when explanation and purpose of CEs was given and understood that support previous literature (Chen & Hoshower, 2003; Darby, 2008).

Differences in gender occurred in this study. When determining purpose and explanation, males showed more understanding of CEs purpose and explanation than females. Gender differences may provide insight into delivery methods of CEs. Understanding the purpose of CEs is an initial step in completing CEs.

Online student participation. When collecting data for this study, the responses regarding online delivery agreed with previous research, where response was very low online compared to traditional collection of data in the classroom. (Avery, Bryant, Mathois, Kang, & Bell, 2006).

The questionnaire for this study was distributed online to 3rd year Doctoral PT students, who primarily were completing externships and residency programs off campus. The questionnaire was also distributed online to Masters students in the DH program, which is primarily an online program. Collecting data from online masters DH students and 3rd year doctoral PT students resulted in very low response rates with only six participants (N=58), all from the Masters Dental Hygiene program (n=15). No participants from the 3rd year PT program (n=43) completed an online questionnaire for this study. Ease of completion was considered, as the questionnaire was distributed via their online class format BlackBoard®, in which PT students check into their online classroom regularly. Ease of access is discussed within the literature in which participation is said to increase with CEs (Avery, Bryant, Mathois, Kang, & Bell, 2006).

Literature also discussed increased participation in open comment feedback with online delivery of CEs (Morrison, 2011; Donovan, Mader, & Shinksy, 2011). Feedback with online delivery may be reflective of ease, as typing is typically faster than hand writing comments. However, this study suggested interesting online participation for this study. Although health professional students indicated online preference for CEs, their online response to the questionnaire in this study was very low. Health profession students were not asked to complete a CE.

Implications

The practical implication of this study is to gain further insight in student participation in CEs. Literature suggests further research in motivation and participation factors(Chen & Hoshower, 1998, Thornton, Adams & Sepheri, 2010, Desnon, Loveday & Dalton, 2010). Literature also supports the importance of course evaluations, in addition to addressing issues of participation and suggestions for improvement (Crews & Curtis 2011; Morrison, 2011; Donovan, Mader & Shinksy 2010). Research findings indicate student participation is low even amidst advancing technology. This may imply that value in CEs is decreased, even amidst ease of delivery.

Other disciplines may not be taught in small cohorts like health profession studies. Results from this study show increased degree levels increase student participation in CEs. Knowledge on how degree levels affect participation may allow instructors and administrators to design CEs to meet student needs, shifting focus to a learner-centered environment. CEs provide valuable feedback, and serve as an assessment tool, which help both students and instructors continuously improve (Huba & Freed, 2000).

Students in this study indicated small cohorts develop more "intimate relationships with professors at the graduate level". Health profession students view their instructors as "future colleagues", and may suggest reasoning for increased participation in CEs. Undergraduate studies incorporate general core classes in a variety of disciplines before a major is selected. Students may not have the same instructor after a course is completed, unlike health profession cohorts. Student participation in CEs may be a perception of low value on CEs, as the relationship between the student and instructor is brief. Feedback participation is low for general core classes, which may foster student belief that changes do not occur.

CEs are commonly used by students to select future courses (Chen & Hoshower, 1998 & 2003, Davidovitch & Soen, 2006; Denson, Loveday & Dalton, 2010, Donnon, Delver & Beran, 2010). Students give feedback to classmates about courses, offering suggestions or recommendations on course selection. Shifting communication from peers to CEs would be insightful and may increase participation in CEs at the undergraduate degree level. Students share among peers their opinions of teaching style, class format and flow, and make recommendations to peers about classes they should or should not take. Students should be encouraged to share their opinions on CEs, in addition to peers. Hence, explanation and purpose of CEs should be important and implemented at undergraduate levels.

This study helps foster how CEs could be designed and implemented. Additionally, results from this study may also modify future questionnaires, to assess further understanding of student awareness and understanding of CEs use. Gaining further insight on CEs preferences could be tailored to specific degree levels in format

and design. For example, baccalaureate students may benefit from detailed explanation of CEs, including use and purpose. Increasing awareness on how CEs benefit students and improve course curriculum may also increase participation.

This study implies that graduate students have a greater understanding of CEs use and purpose than baccalaureate students. Graduate CEs may be designed to collect specific feedback on course instruction and curriculum. Results from this study allow faculty and administration understanding on how students within various programs view CEs. For example, if PT students recognize CEs purpose and understand more than other programs, it may be conducive for other professions to examine why.

Limitations

This study utilized a convenience sample comprised of health professional students at EWU and does not represent a generalized population. Student age within the departments was varied, in addition to gender. The entire sample was predominantly female. Externships and community service are incorporated within each health science study, some departments utilize externships throughout degree completion; other departments have the final year of degree completion as a full-time externship. CE participation may be affected by students on campus versus students in externships. The health profession student sample was not a true representation of degree ranks within many colleges and universities. Unlike many disciplines, health profession students complete their degrees within small cohorts and typically have the same professors for a period of time.

Another limitation of this study was method of delivery. Each department utilized various methods of delivery from traditional paper CEs, to online format, to

entire class participation scheduled in a computer lab. Various methods of delivery and student preference of delivery should be considered. This study indicated health profession students prefer online delivery of CEs therefore the varied administration of CEs is a limitation.

Recommendations

This study demonstrates degree level and awareness of CEs utilization affects student participation. These findings have the potential to redirect how CEs are designed and implemented.

Degree levels affect participation in CEs. Administrators may consider modifications of CEs design and implementation to meet the needs of the various degree levels. Additionally, if participation is connected to degree level, administrators should also consider how this information will impact instructor salary, tenure, retention, and promotion. Administration should not consider low student participation in CEs as a reflection of instruction. Low participation may be reflective of understanding and value of CEs.

Student use of CEs may also be used as a means to communicate personal opinion, expressing negative complaints. Low confidence in change, may also indicate perception of no improvement. Students may use CEs to offer non-constructive criticism and negative feedback toward instruction or curriculum. Explanation of use and purpose of CEs is very important. Students may not understand how to give constructive feedback. This study suggests health profession students understand purpose of CEs, however, educating students on how to give constructive feedback may be appropriate. Combining how to give constructive feedback and explanation of CEs purpose may increase student awareness and understanding of the importance of CEs and how

constructive feedback implements improvements and change. Undergraduate programs need to better explain the purposes of CEs. Students may feel they have the ability to become change agents within their courses, and are able to voice their suggestions for course improvement and instruction, when a clear understanding and purpose of CEs is given.

Students want on-line format. A recommendation would be reminders from the instructors because reminders, via email or in-class announcements, increase participation in online format deliveries. A reminder, in addition to explaining importance and purpose of CEs, would prepare students to participate in online CEs.

There is strong consensus among these study participants that suggests CEs should be both formative and summative. Delivery of mid-course CEs in addition to the end of course may allow students' confidence to increase in how CEs are used. Students who give feedback want to feel their voice is valued, creating a learner-centered environment. Huba and Freed (2000) recommend the use of "two-way feedback". This concept requires implementation of a quick questionnaire to give students once a week, or after a lecture or lab. Two-way feedback emphasizes that faculty members give feedback to students on student feedback just received. Instructors may provide feedback on information received from students in various ways: clarification of a lecture or lab with increased lecture time, technology change in assignments, revisions of assignments or due dates, case-study or role playing, are some examples. Students are able to see changes implemented within the course, emphasizing a learner-centered environment. Student confidence in lending voice to improve curriculum will increase, thus increasing participation in CEs. An example of a Two-way form is listed in Table 11.

Table 11

Two-way Feedback

	Little		Fair		A lot
Overall, how much did you get out of class today?	1	2	3	4	5

What was the most important thing you learned?

What was the muddiest point?

What single change by the instructor would have most improved this class?

(2000). Huba & Freed, Learner Centered Assessment, p. 131.

Suggestions for Additional Research

Findings indicate Doctorate students understand the purpose of CEs more than Masters and baccalaureate students. Additionally, further insight into other Doctoral disciplines including other health profession programs may determine if results are specific to field of practice or primarily Doctoral students.

Further research is indicated in determining if students feel feedback is implemented. Student comments suggested one quarter of students did not feel their recommendations are utilized for course improvement. Tenure was indicated as being a reason for no suggested changes being implemented by the instructor. Research into differences between tenure and non-tenured faculty and course modifications based on CEs is warranted. Further study into length of teaching and instructor motivation to improve course curriculum is recommended, and may provide knowledge on student participation in CEs.

Method of delivery of CEs is also indicated for further research. In this study, results indicated preference toward online delivery, however, literature demonstrates online participation is low (Cohen-Shotanus, Shonrock-Adema, J., & Schmidt, H., 2010). Research into differences of various online delivery systems would benefit administration. Investigating whether personal email response differs from online participation in a computer lab as class would benefit from further research.

Gender differences may play a larger role in student participation in CEs. Further research in gender differences learning how differences relate to giving feedback are recommended. Further research in participation through degree levels may provide a better understanding of factors that predict active participation. Additionally, further study could be replicated in a larger student body group outside of health profession students allowing for a more generalized population.

How to give feedback should also be considered for future study. Do students know how to give feedback? Are students aware of how to differentiate between positive and negative feedback. Studies indicate CEs explanation increases participation. Investigating student knowledge in how to give feedback warrants further study.

Conclusions

Student participation and factors that affect motivation to participate is worth investigating. The aim of this study was to evaluate student participation in CEs within degree levels in the Health Science programs at EWU. In addition, the study aimed to evaluate if students feel feedback is utilized by faculty and whether online or traditional CEs delivery is preferred.

Health professional students are aware of CEs use and purpose. Students also feel that feedback given in CEs is utilized by instructors and faculty. Student participation in CEs increases as degree levels increase. On-line format is preferred, in addition to a mid-course CEs. These results provide direction designing CEs to meet student learning needs. For example, incorporating classroom time to explain CEs purpose increases awareness and understanding of CEs. Instructors should be cautious to assume students awareness of CEs use and purpose is understood.

Feedback from CEs should be considered and implemented where appropriate. A collaborative approach between instructor and students move toward a learner centered teaching environment, rather than a teacher-centered environment. Incorporating mid-course CEs fosters a collaborative approach between instructor and students. Mid-course CEs offer formative feedback. Additionally, offering traditional end of course CEs provides summative feedback. Formative and summative feedback from CEs allows instructors continuous response on how students' learning is progressing.

Further comparison studies between student degree levels and participation may provide valuable insight on how CEs are implemented and distributed. Additionally, increased participation gains valuable feedback from students who offer insight regarding student motivation to complete CEs. Changing course content, curriculum and instruction benefits the learning environment. Recognizing how degree levels may play a part in student motivation to participate in CEs, allows for design modifications to suite the various degrees.

References

American Dental Hygiene Association, (2007). American Dental Hygienists' Association National Dental Hygiene Research Agenda. Retrieved from www.adha.org

Avery, R., Bryant, K., Mathois, A., Kang, H., & Duncan, B. (2006). Electronic course evaluations: does an online delivery system influence student evaluations? *Journal of Economic Education, 37*(1), 21-37.

Beran, T., & Rokosh, J. (2009). Instructors' perspectives on the utility of student ratings of instruction. *Instructional Science, 37*(2). 171-184. doi:10.1007//s11251-007-9045-2.

Beran, T., & Violato, C. (2009). Student ratings of teaching effectiveness: student engagement and course characteristics. *Canadian Journal of Higher Education, 39*(1), 1-13.

Beran, T., Violato, C., Kline, D., & Frideres, J. (2009). What do students consider useful about student ratings? *Assessment & Evaluation in Higher Education 34*(5). 519-527.

Beran, T., & Rokosh, J. (2009). The consequential validity of student ratings: what do instructors really think? *The Alberta Journal of Educational Research, 55*(4). 497-511.

Beran, T., Violato, C., & Kline, D. (2007). What's the use of student ratings of instruction for administrators? one university's experience. *Canadian Journal of Higher Education, 37*(1). 27-43.

Beran, T., & Violato, C. (2005). Ratings of university teacher instruction: how much do student and course characteristics really matter? *Assessment & Evaluation in Higher Education, 30*(6). 593-601.

Beran, T., Violato, C., Kline, D., & Frideres, J. (2005). The utility of student ratings of instruction for students, faculty, and administrators: a consequential validity study. *The Canadian Journal of Higher Education, 35*(2). 49-70.

Bowling, N. (2008). Research note does the relationship between student ratings of course easiness and course quality vary across schools? the role of school academic rankings. *Assessent & Evaluation in Higher Education, 33*(4), 455-464.

Brill, R. (2007). Three-option feedback: a strategy for improving course evaluation. *Teaching Professor, 21*(6), 2-7.

Brownell, P., & McInnes, M. (1986). Budgetary participation,motivation, and managerial performance, *Accounting Review, 61*(4). 587-600.

Burns, N., & Grove, S. (2009). *The Practice of Nursing Research, Appraisal, Synthesis, and Generation of Evidence,* St Louis, MO, Sunders Elsevier.

Centra, J. (2006). The Student Instructional Report II: Its development, uses, and supporting research (An issue paper from ETS). Retrieved from Educational Testing Service SIR II website: http://www.ets.org/Media/Products/SIR_II/pdf/53228_sirII-white_paper.pdf

Chen, Y., Gupta, A., & Hoshower, L. (2004). Marketing students perceptions of teaching evaluations: an application of expectancy theory. *Marketing Education Review, 14*(2), 23-36.

Chen, Y., & Hoshower, L. (2003). Student evaluation of teaching effectiveness: an assessment of student perception and motivation. *Assessment & Evaluation in Higher Education, 28*(1), 71-87.

Chen, Y., & Hoshower, L. (1998). Assessing student motivation to participate in teaching evaluations: an application of expectancy theory. *Issues in Accounting Education, 13*(3), 531-549.

Clement, M. (2011). Three steps to better course evaluations. *The Teaching Professor, 25*(4), 1.

Cohen-Schotanus, J., Schönrock-Adema, J., & Schmidt, H. (2010). Quality of courses evaluated by 'predictions' rather than opinions: Fewer respondents needed for similar results. *Medical Teacher, 32*(10), 851-856. doi:10.3109/01421591003697465.

Cooper, D.R. and Schindler, P.S. (2011), *Business Research Methods*, 11th Edition, McGraw-Hill/Irwin New York, NY.

Culver, S. (2010). Course grades, quality of student engagement, and students' evaluation of instructor, *Journal of Teaching Learning in Higher Education, 22*(3) 331-336.

Crews, T., & Curtis, D. (2011). Online course evaluations: faculty perspective and strategies for improved response rates. *Assessment & Evaluation in Higher Education, 36*(7), 865-878.

Darby, J. (2006). The effects of the elective or required status of courses on student evaluations. *Journal of Vocational Education and Training, 58*(1), 19-29.

Darby, J. (2006). Evaluating courses: an examination of the impact of student gender. *Educational Studies, 33*(2), 187-199.

Darby, J. (2007). Evaluating course evaluations: the need to establish what is being measured. *Assessment & Evaluation in Higher Education, 32*(4), 441-455.

Darby, J. (2007). Are course evaluations subject to a halo effect? *Research in Education 77*, 46- 55.

Darby, J. (2008). Course evaluations: a tendency to respond "favorably" on scales? *Quality Assurance in Education 16*,(1), 7-18.

Davidovitch N., & Soen, D. (2006). Using students' assessments to improve instructors' quality of teaching. *Journal of Further and Higher Education, 30*(4), 351-376.

Davidovitch, N., & Soen, D. (2009). Myths and facts about student surveys of teaching the links between students' evaluations of faculty and course grades. *Journal of College Teaching Learning, 6*(7), 41-49.

Davidovitch, N., & Soen, D. (2011). Student Surveys And Their Applications In Promoting Academic Quality In Higher Education. *Journal of College Teaching & Learning*, *8*(6), 31-46.

Denson, N., Loveday, T., & Dalton, H. (2010). Student evaluation of courses: what predicts satisfaction?. *Higher Education Research & Development*, *29*(4), 339-356. doi:10.1080/07294360903394466.

De Paola, M. (2009). Does teacher quality affect student performance? evidence from an Italian university. *Bulletin of Economic Research, 61*(4), 353-377.

Donmeyer, C.; Baum, R. Hanna, & Chapman, K. (2004). Gathering faculty teaching evaluations by in-class and online surveys: Their effects on response rates and evaluations. *Assessment & Evaluation in Higher Education, 30*(2), 123-136.

Donnon, T., Delver, H., & Beran, T. (2010). Student and teaching characteristics related to ratings of instruction in medical sciences graduate programs. *Medical Teacher, 32*(4), 327-332. doi:10.3109/01421590903480097.

Donovan, J., Mader, C., & Shinsky, J. (2010). Constructive student feedback: Online vs. traditional course evaluations. *Journal of Interactive Online Learning, 9*(3), 283-296.

Erdogan, M., & Tuncer, G., (2009). Evaluation of a course: Education and awareness for sustainability. *International Journal of Environmental & Science Education, 4*(2), 133-146.

Fah, B., & Osman, S. (2011). A Case Study of Student Evaluation of Teaching in University. *International Education Studies, 4*(1), 44-50.

Fisher, R., & Miller, D. (2008). Responding to Student Expectations: A partnership approach to course evaluation. *Assessment & Evaluation In Higher Education, 33*(2), 191-202.

Frick, T., Chadha, R., Watson, C., & Zlatkovska, E. (2010). Improving course evaluations to improve instruction and complex learning in higher education. *Educational Technology Research Development*. *58*(2), 115-136. doi: 10.1007/s11423-009-9131-z.

Geiger, M. & Cooper, E. (1996). Using expectancy theory to assess student motivation, *Issues in Accounting Education, 11*(1), 605-614.

Giesey, J., Chen, Y., & Hoshower, L. (2004). Motivation of engineering students to participation in teaching evaluations. *Journal of Engineering Education. 93*(4). 303-312.

Giles, A., Martin, S., Bryce, D., & Hendry, G. (2004). Students as partners in evaluation: student and teacher perspectives. *Assessment & Evaluation in Higher Education. 29*(6). 681-685.

Gordon, M., & Palomn, O. (2010). Spare the rigor, spoil the learning. *Academe 96*(4).25-27.

Goos, M., Gannaway, D., & Hughes, C. (2011). Assessment as an equity issue in higher education: comparing the perceptions of first year students, course coordinators, and academic leaders. *Australian Educational Researcher*. *4*(2), 133-148.

Hancock. D. (1995). What teachers may do to influence student motivation: an application of expectancy theory, *The Journal of General Education, 44*(3). 171-179.

Harrell, A., Caldwell, C., & Doty, E. (1985). Within-person expectancy theory predictions of accounting students' motivation to achieve academic success, *Accounting Review, 60*(4), 724-735.

Harrison, P., Douglas, D., & Burdsal, C. (2004). The relative merits of different types of overall evaluations of teaching effectiveness. *Research in Higher Education, 45*(3), 311-323.

Hlapanis, G., & Dimitrakopoulou, A. (2007). A course model implemented in a teacher's learning community context: issues of course assessment. *Behaviour & Information Technology, 26*(6), 561-578.

Hassan, K. (2009). Investigating substantive and consequential validity of student ratings of instruction. *Higher Education Research & Development, 28*(3), 319-333. doi:10.1080/07294360902839917.

Henry, R. (2011). A Comparison of Millennial Dental Hygiene Student and Faculty Classroom Expectations. *Journal of Dental Hygiene, 85*(3), 229-239.

Huba, M., & Freed, J. (2000). *Learner-Centered Assessment on College Campuses Shifting the Focus from teaching to Learning*, Needham Heights, MA, Allyn & Bacon.

Jones, R. (2008). The why of class participation: a question worth asking. *College Teaching, 56*(1), 59-63.

Jones, S., & Dindia, K. (2004). A meta-analytic perspective on sex equity in the classroom. *Review of Educational Research, 74*(4), 443-471.

Kulik, J. (2001). Student ratings: validity, utility, and controversy. *New Directions for Institutional Research, 109*, 9-25.

Liu, Y. (2006). A comparison study of online versus traditional student evaluation of instruction. *International Journal of Instructional Technology and Distance Learning, 3*(4), 15-29.

Louie, B., Byrne, N., & Wasylenki, D. (1996). From feedback to reciprocity. developing a student-centered approach to course evaluation. *Evaluation & the Health Professions, 19*(2), 231-242.

Marsh, H., & Roche, L. (2000). Effects of grading leniency and low workload on students' evaluations of teaching: Popular myth, bias, validity, or innocent bystanders? *Journal of Educational Psychology, 92*, 202-228.

McPherson, M., & Jewell, T. (2007). Leveling the playing field: should student evaluation scores be adjusted? *Social Science Quarterly 88*(3), 868-881.

McMahon, T. (2010). Peer feedback in an undergraduate program: using action research to overcome students' reluctance to criticize. *Educational Action Research, 18*(2), 273-287. doi:10.1080/09650791003741814.

Morrison, R. (2011). A comparison of online versus traditional student end-of-course critiques in resident courses. *Assessment & Evaluation in Higher Education, 36*(6), 627-641.

Murky, D., & Frizzier, K. (1986). A within-subjects text of expectancy theory in a public accounting environment, *Journal of Accounting Research,* (2), 400-404.

Norris, J., & Conn, C. (2005). Investigating strategies for increasing student response rates to online-delivered course evaluations. *The Quarterly Review of Distance Education, 6*(1), 13-29.

Nowell, G. (2011). Student course evaluations in traditional and blended courses: a case study. *American Journal of Business Education, 4*(11), 13-18.

O'Keefe, M., & Britten, N. (2005). Lay participation in medical school curriculum development: Whose problem is it?. *Medical Education, 39*(7), 651-652. doi:10.1111/j.1365-2929.2005.02216.x

Paolo, A.; Bonaminio, C.; Gibson, T., Partridge, T., Kallail, K. (2000). Response rate comparisons of e-mail and mail-distributed student evaluations. *Teaching & Learning in Medicine,12*(2), 81-84.

Pennee, D. (2007). Between cultures: using curriculum assessment to develop and deliver integrated core of an arts and sciences program. *New Directions For Teaching & Learning,* (112), 59-67. doi:10.1002/tl.298.

Remedios, R., & Liberman, D. (2008). I liked your course because you taught me well: the influence of grades, workload, expectations and goals on students' evaluations of teaching. *British Educational Research Journal, 34*(1), 91-115.

Schaub-de Jong, M., Schonrock-Adema, J., Dekker, H., Verkerk, M., & Cohen-Schotanus, J. (2011). Development of a student rating scale to evaluate teachers' competencies for facilitating reflective learning. *Medical Education, 45*, 155-165. doi: 10.1111/j.1365-2923.2010.03744.x

Snead, K., & Harrell, A. (1994). An application of expectancy theory to explain a manager's intention to use a decision support system, *Decision Sciences, 25*(4). 449-513.

Steinert, Y., Mann, K., Centeno, A., Dolmans, D., Spencer, J., Gelula, M., & Prideaux, D. (2006). A systematic review of faculty development initiatives designed to improve teaching effectiveness in medical education: BEME Guide No. 8. *Medical Teacher, 28*(6), 497-526. doi:10.1080/01421590600902976.

Thornton, B., Adams, M., & Sepehri, M. (2010). The Impact Of Students' Expectations of Grades and Perceptions of Course Difficulty, Workload, and Pace On Faculty Evaluations. *Contemporary Issues in Education Research, 3*(12), 1-5. doi: 2243673671.

Vroom, V. (1964). *Work and Motivation*, New York, NY, John Wiley & Sons.

Wheeler, R. (2008). Experimental learning: impact of two instructional methods on student-instructor interaction, student critical thinking, and student course evaluations. *Journal for Advancement of Marketing Education, 12*(7), 63-78.

Woloschuk, W., Coderre, S., Wright, B., & McLaughlin, K. (2011). What factors affect students' overall ratings of a course?. *Academic Medicine: Journal Of The Association Of American Medical Colleges*, *86*(5), 640-643.

Wright, R., & Palmer John, C. (2006). Comparative Analysis of Different Models Explaining the Relationship between Instructor Ratings and Expected Student Grades. *Educational Research Quarterly*, *30*(2), 3-19.

Zikmund, W., Babin, B., Carr, J., & Griffin, M. (2010) *Business Research Methods*, 8th Edition, South-Western, Cengage Learning, Mason, Ohio, OH.

Appendix A

Eastern Washington University

at Cheney and Spokane

MEMORANDUM

To: Yvonne Aiken, Department of Dental Hygiene, 160 HSB

From: Sarah Keller, Chair, Institutional Review Board for Human Subjects Research

Date: April 5, 2013

Subject: Review of HS-4223 *Student Participation in Course Evaluations: A Comparison within Graduate Levels*

Human subjects protocol HS-4223 *Student Participation in Course Evaluations: A Comparison within Graduate Levels* has been reviewed and determined to be exempt from further review according to federal regulations for the Protection of Human Subjects under CFR Title 45, Part 46.101(b)(1-6), conditional upon the changes listed below being made and approved. Research qualifying for an exemption is valid for a period of one year, to April 5, 2014. If you wish to continue gathering data for the study after that date, you must file a Renewal of Approval application *prior to its expiration*, otherwise the project will be closed and you would need to submit a new application for IRB review if you wish to continue the research.

A signed, approved copy of your application is enclosed.

Before you begin:

1. Since your study is anonymous you shouldn't use a consent form. You should, however, provide them with information about the study prior to their choosing whether or not to participate and the usual way to do this is with an information sheet that they can keep. You should just convert your consent form to an information sheet as it has the required information. The signature on the information

sheet may be yours if you want to, but this isn't necessary. They aren't going to sign it.
2. Your Investigator Script should take out all the information about the consent form
3. Would you please send me copies of the revised documents for our files.

If subsequent to initial approval the research protocol requires minor changes, the Office of Grant and Research Development should be notified of those changes. Any major departures from the original proposal must be approved by the appropriate IRB review process before the protocol may be altered. A Change of Protocol application must be submitted to the IRB for any substantial change in protocol.

If you have additional questions please contact me at 359-7039; fax 509-359-2474; email skeller@ewu.edu. It would be helpful if you would refer to HS-4223 if there were further correspondence as we file everything under this number. Thank you.

cc: R.Galm
R,Stolberg
Graduate Office

Appendix B

Information Sheet

Student Participation in Course Evaluations: A Comparison within Graduate Levels

Hello,

My name is Yvonne Aitken. I am a graduate student at Eastern Washington University in Cheney, Washington. As part of my requirements for the Masters in Science in Dental Hygiene, I am conducting research for my thesis to investigate health professional students' knowledge of the use of course evaluations. The design of this research is quantitative in the form of a survey and will be administered to various levels of EWU health professional degree students. Upon completion of the study, the results will be published in my thesis document and available to participants for review.

Participation in the study is voluntary and anonymous. You may withdraw from the survey at any time. You may skip any question you do not feel comfortable answering. Please do not put any identifying information on the survey. Consent for the survey will be assumed by completion.

If you have any questions or concerns about this survey please contact myself at 509-921-2734 <yaitken@eagles.ewu.edu> or my thesis advisor Rebecca Stolberg at 509-828-1298 <rstolberg@ewu.edu>. If you have any concerns about your rights as a participant in this research or any complaints you wish to make, you may contact Ruth Galm, Human Protections Administrator at Eastern Washington University (509-359-7971/6567) <rgalm@ewu.edu>.
Thank you very much for your consideration and time in completing this survey for my research.

Yvonne Aitken, RDH, BSDH

Appendix C

Investigator Script
Student Participation in Course Evaluations: A Comparison within Graduate Levels
Yvonne Aitken, RDH, EWU Master's Candidate
Rebecca Stolberg, RDH, MS, EWU Thesis Chairperson

"I want to thank your Professor, Dr. _____, for allowing me to take some class time to ask you to participate in my thesis research. My name is Yvonne Aitken, and I am the Primary Investigator in this research. I received my BSDH Degree in 2007, and currently working on my Master in Science in Dental Hygiene Degree. This research will serve as partial fulfillment of my Masters degree.

I am investigating student participation in Course Evaluations within academic degree ranks. Participation is voluntary. Confidentiality and anonymity will be secure. Participation holds no financial burden or discomfort. Should you agree to participate, a letter of consent will need to be signed and dated by each participant. Each participant will receive a copy of the consent form.

Eastern Washington University's Health Science Department students were selected as samples in the study because the sample reflects various academic degree ranks from undergraduate to Doctorate. Students who do not wish to participate do not need to complete a consent form or participate.

I have designed a questionnaire for my research. It contains 5 demographic questions, 11 Likert Type questions, and 2 open-comment questions. It should not take longer than 10 minutes to complete. I will hand out the questionnaire. Please do not put any identifying markers on the questionnaire. Please complete the questionnaire and give honest feedback. After completing the questionnaire, please place them on top of the manila envelope in the front of the classroom. If you choose not to participate simply return the questionnaire without signing the informed consent or completing the questionnaire.

Thank you for your participation in my research. If you'd like to see the results of this research please provide your contact information on the consent form and I will gladly share the results with you upon completion. You may include participation in this study in your resume or CV. In appreciation of granting me your valuable time, there is a cookie you can pick up when you turn in your survey. Thank you again, for your participation."

Appendix D

Course Evaluations (CE) have been used widely in educational settings to gain feedback from students. This questionnaire will attempt to gain insight on student participation in course evaluations among Health-Science profession students at Eastern Washington University.

Demographic Information: (Please fill in the bubble for the most appropriate response) Demographic questions are asked in order to make sure that our sample represents the population and to groups similar respondents to make comparisons.

Department of Study:

Physical Therapy ❍
Occupational Therapy ❍
Communication Disorders ❍
Dental Hygiene ❍

Degree Sought:

Doctorate ❍
Masters ❍
Post Baccalaureate Certificate ❍
Baccalaureate ❍

Student Credit Status:

Full-Time
(12 credits for undergraduate/-10 credits for graduate) ❍
Part-Time
(less than 12 credits for undergraduate/ less than 10 credits for graduate) ❍

Year in Program:

1st Year ❍
2nd Year ❍
3rd Year ❍

Gender:

Female ❍
Male ❍

Survey Questions: For each of the following statements, please circle the choice that best represents your feelings about that statement.

1. I prefer paper Course Evaluations (CE) instead of online CE.

1	2	3	4	5	6	7
Strongly Disagree			No Preference			Strongly Agree

2. The purpose of CE has been explained to me.

1	2	3	4	5	6	7
Strongly Disagree			No Preference			Strongly Agree

3. I understand the purpose of CE.

1	2	3	4	5	6	7
Strongly Disagree			No Preference			Strongly Agree

4. I believe feedback obtained from CE is implemented into courses and curriculum.

1	2	3	4	5	6	7
Strongly Disagree			No Preference			Strongly Agree

5. I believe Masters students take participation in CE more seriously than undergraduate students.

1	2	3	4	5	6	7
Strongly Disagree			No Preference			Strongly Agree

6. I believe Doctorate students take participation in CE more seriously than Masters students.

1	2	3	4	5	6	7
Strongly Disagree			No Preference			Strongly Agree

7. I am aware that CE are used for faculty (instructor) promotion and tenure decisions

1	2	3	4	5	6	7
Strongly Disagree			No Preference			Strongly Agree

8. I am aware that CE are used for faculty (instructor) retention decisions.

1	2	3	4	5	6	7
Strongly Disagree			No Preference			Strongly Agree

9. I am aware that CE are used for faculty salary increases.

1	2	3	4	5	6	7
Strongly Disagree			No Preference			Strongly Agree

10. I think CE should be done in the middle of a course and at the end of a course.

1	2	3	4	5	6	7
Strongly Disagree			No Preference			Strongly Agree

11. I am more likely to complete CE if I know I'm going to get a high grade in the course.

1	2	3	4	5	6	7
Strongly Disagree			No Preference			Strongly Agree

Open-comment questions:

1. Do you believe more years of education increase or decrease participation in CE? Why or why not?

2. Do you believe CE improve course curriculum and/or instruction? Why or why not?

Vita

Yvonne Aitken, RDH, BSDH

Private Practice Office Address:
13206 E Mission Ave
Spokane Valley, WA 99216
(509)928-3131
Clinical Instructor Office Address:
Health Sciences Building
310 N Riverpoint Blvd
Spokane, WA 99202
(509)828-1302
aitkeny@eagles.ewu.edu

Citizenship: United States of America

Graduate Education

2011 - present	M.S.D.H.(c)	Master Of Science in Dental Hygiene Eastern Washington University Cheney, Washington

Undergraduate Education:

2007	B.S.D.H.	Bachelor of Science in Dental Hygiene Eastern Washington University Cheney, Washington
2003	A. A.	Associate in Arts Bellevue Community College Bellevue, Washington

Academic Appointment:

Spring 2011 - Present	Restorative Clinical Instructor Eastern Washington University Department of Dental Hygiene Spokane, Washington
Fall 2007	Clinical Instructor Eastern Washington University Department of Dental Hygiene Spokane, Washington

Professional Experiences:

January 2008 Present	Clinical Dental Hygienist Full Time, General Family Practice Restorative and Traditional Sodorff and Wilson Family Dentistry Spokane, Washington

COURSE EVALUATIONS

June 2007 - January 2008	Clinical Dental Hygienist Full Time, Pediatric Practice Restorative Moffitt Pediatric Dentistry Spokane, Washington
Sept 1999 - June 2002	Attendance Secretary Full Time, Secondary Education Liberty High School Renton, Washington

Licensure:

2007 - present	Registered Dental Hygienist Washington State Board of Dental Examiners

Certifications:

2007 - present	Registered Dental Hygienist with Expanded Functions including local anesthesia, nitrous oxide/oxygen sedation, pit and fissure sealants, and Restorative. Washington State Board of Dental Examiners
2003 - Present	Basic Life Support and CPR

Professional Organizations:

2011 - Present	American Dental Education Association
2009 - Present	Inland Northwest Dental Hygiene Study Club • 2011 Committee Chair Member
2004 - Present	Washington State Dental Hygienists' Association
2004 - Present	Eastern Washington Dental Hygienists' Society
2004 - Present	American Dental Hygienists' Association

Honors and Awards:

March 2013	ADEA Oral B Scholarship
June 2007	Best Restorative Clinician Eastern Washington University
June 2007	Leadership Award Washington State Dental Hygienists' Association
June 2007	Cum Laude Eastern Washington University
June 2007 - Sept 2003	Dean's Academic List

Eastern Washington Student Committees:

2007	Student American Dental Hygienists' Association Class Representative
2007	Give Kids A Smile Student Coordinator
2004 - 2007	Student Class Officer

Community Service/Volunteer:

Present	Boy Scouts of America Parent Volunteer

	Spokane Valley, Washington
Present	Classroom Volunteer Chester Elementary and Horizon Middle School Spokane Valley, Washington
2005 - Present	Parent/Teacher/Student Association Spokane Valley, Washington
2004 - 2005	Youth Leader Valley Church of Christ Spokane Valley, Washington

Teaching Responsibilities:

Spring 2011 - Present	DNHY Course 380 Restorative Dental Hygiene Instructor Eastern Washington University
Sept 2007 - Dec 2007	DNHY Course 380 & 381 Clinical Dental Hygiene Instructor Eastern Washington University

Presentation:

Spring 2011	Advanced Instrumentation 2nd Year Clinic Eastern Washington University