2005

Teaching excellence: Perceptions of community college students

Gary Robert Oesch

University of South Florida

Follow this and additional works at: http://scholarcommons.usf.edu/etd

Part of the American Studies Commons

Scholar Commons Citation

This Dissertation is brought to you for free and open access by the Graduate School at Scholar Commons. It has been accepted for inclusion in Graduate Theses and Dissertations by an authorized administrator of Scholar Commons. For more information, please contact scholarcommons@usf.edu.
Teaching Excellence: Perceptions of Community College Students

by

Gary Robert Oesch

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Department of Adult, Career, and Higher Education
College of Education
University of South Florida

Major Professor: James Eison, Ph.D.
Robert Dedrick, Ph.D.
Michael Mills, Ph.D.
W. Robert Sullins, Ed.D.

Date of Approval
September 22, 2005

Keywords: faculty evaluations, surveys, effectiveness, ratings, attitudes

© Copyright 2005, Gary Robert Oesch
DEDICATION

This dissertation is dedicated to the people who have been major influences on me throughout my life. To my father, who taught me responsibility, respect, and the passion and drive to accomplish anything I set out to accomplish. To my late mother, who taught me compassion, concern, and that love can conquer all. To my stepmother who has accepted me as her own son. To my wife and daughter, who have endured many limited vacations, limited quality time and times with an obsessive graduate student. I promise to make it up to you. I appreciate all of you for the support, the caring, and the love provided to me over my educational career. Finally, to Dr. Michael Rom, who has been my mentor and friend since Junior High School. Thanks for guiding me and stimulating my interest in Psychology and Education. Thanks for giving me my first college teaching job and for a friendship that has spanned three decades.
ACKNOWLEDGEMENTS

I am grateful to those who have made it possible for me to obtain my educational goals. I would not have been able to complete this dissertation if it were not for the patience, guidance, and support of Dr. James Eison at the University of South Florida. I am also extremely grateful to Dr. Robert Sullins, Dr. Michael Mills, and Dr. Robert Dedrick who not only agreed to serve on my dissertation committee, but also provided valuable insights, opinions and expertise that allowed the dissertation process to be more rigorous and achievable. Additionally, I appreciate the efforts of Dr. Jane Applegate and Dr. Dierdre Cobb-Roberts who acted as the outside chairs for my proposal defense and my final defense, respectively.
# TABLE OF CONTENTS

List of Tables iv

List of Figures vi

Abstract vii

**Chapter One  Introduction**

Statement of the Problem  3

Purpose of the Current Study  4

Research Questions  12

Significance of the Study  13

Limitations of the Study  14

Organization of the Study  16

**Chapter Two  Literature Review**  18

Use of Student Evaluations to Assess Quality Instruction  19

Defining Teaching Excellence  19

  - Diversity Related Dimension  23
  - Technology Related Dimension  24
  - Ethics/Integrity Related Dimension  25
  - Active Learning Dimension  26

Excellence versus Effectiveness  28

Use of Student Evaluations to Determine Excellence  28

Studies Conducted at Community Colleges  41

Validity Concerns of Student Evaluations  42

Reliability Concerns of Student Evaluations  48

Prior Factor Analyses of the SEEQ  51

Who are Today's Students?  53

Conclusions  58

**Chapter Three  Methods**  60

Research Questions  61

Pilot Study  61

Focus Groups and outside experts  61

Methods and Instrumentation  64

Primary Study  65

  - Participants and Procedures  65
  - Instrumentation  66

Reliability and Validity of Scores  69
<table>
<thead>
<tr>
<th>Chapter Four</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Question 1 - Perceptions of Teaching Excellence</td>
<td>74</td>
</tr>
<tr>
<td>Research Questions 2 and 3 - Confirmatory Factor Analysis of Community College Students</td>
<td>75</td>
</tr>
<tr>
<td>Research Question 4 - Influence of Demographics on Perceived Teaching Excellence</td>
<td>78</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter Five</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter Summary</td>
<td>112</td>
</tr>
</tbody>
</table>
Interpretation of the results 118
  Community College Students’ Perceptions of Teaching Excellence 119
  Factor Models of Teaching Excellence 131
    Factor structure using the original SEEQ items 131
    Factor structure using the modified version of the SEEQ 136
  Relationship between Student Demographics and Perceptions of Teaching Excellence 140
Limitations of the Study 147
Implications for Community College Instructors 149
Implications for Faculty Development 156
Implications for Future Research 157
Implications for Designers of Student Rating Forms 161
Significance of the Study 162

References 164

Appendices
  Appendix A: Dimensions with Related Items 178
  Appendix B: Original Proposed Survey Instrument 182
  Appendix C: Final Survey Booklet 187
  Appendix D: Informed Consent 193
  Appendix E: PHCC Course Evaluation Form 195
  Appendix F: Faculty Forum Format – Pilot study 196
  Appendix G: Summary of Faculty Focus Group 198
  Appendix H: Student Focus Group Format 201
  Appendix I: Summary of Student Focus Group 203
  Appendix J: Summary of Panel of Experts – Pilot Study 205

Author Note 206

About the Author End Page
LIST OF TABLES

Table 1: Breakdown of Student Participant’s Demographic Data                                                207
Table 2: Descriptive Statistics of Dimensions Used in the Study Survey                                        210
Table 3: Item Means and Standard Deviations of Student Responses.                                             211
Table 4: Confirmatory Factor Analysis for Marsh’s Original Eight dimensions
          with Standardized Estimates and Standard Errors                                                    216
Table 5: Correlation Matrix of Eight Dimensions                                                                 219
Table 6: Correlation Matrix of Eight Dimensions – Marsh’s SEEQ                                               220
Table 7: Top 10 Modification Indices for Factor Loading of the CFA
          (Eight Dimension Model)                                                                             221
Table 8: Top 10 Modification Indices for Covariances of Uniqueness
          (Eight Dimension Model)                                                                             223
Table 9: Model Results for Confirmatory Factor Analysis 12 Dimensions
          with Standardized Estimates and Standard Errors                                                    227
Table 10: Correlation Matrix of 12 Dimensions                                                                     231
Table 11: Top 10 Model Indices For Factor Loadings of the CFA (12
          Dimension Model)                                                                                     233
Table 12: Top 10 Modification Indices for Covariances of Uniqueness
          (12 Dimension Model)                                                                                   234
Table 13: Standardized Coefficients (Beta) Results by Dimension                                               238
Table 14: Descriptive Statistics for Learning by Age
Table 15: Descriptive Statistics for Learning by Ethnicity
Table 16: Descriptive Statistics for Enthusiasm by Ethnicity
Table 17: Descriptive Statistics for Clarity by Age
Table 18: Descriptive Statistics for Clarity by Ethnicity
Table 19: Descriptive Statistics for Group by Ethnicity
Table 20: Descriptive Statistics for Breadth by Ethnicity
Table 21: Descriptive Statistics for Breadth by Semester Hours
Table 22: Descriptive Statistics for Breadth by Reason for Attendance
Table 23: Descriptive Statistics for Assignment by Age for
Table 24: Descriptive Statistics for Technology by Age
Table 25: Descriptive Statistics for Technology by Ethnicity
Table 26: Descriptive Statistics for Technology by Reason for Attendance
Table 27: Descriptive Statistics for Diversity by Age
Table 28: Descriptive Statistics for Ethics by Age
Table 29: Descriptive Statistics for Ethics by Reason for Attendance
Table 30: Descriptive Statistics for Active Learning by Age
Table 31: Descriptive Statistics for Active Learning by Ethnicity
Table 32: Summary of Predictor Variables for Each Dimension
LIST OF FIGURES

Figure 1: Measurement model underlying the structure of teaching excellence

Eight dimension model: 261

Figure 2: Measurement model underlying the structure of teaching excellence

Twelve dimension model: 263

Figure 3: Diagram of standardized estimates and standard errors

(8 dimensions) 265

Figure 4: Frequency graph of model modification indices

(BY Statements) for 8 dimensions 267

Figure 5: Frequency graph of model modification indices

(WITH Statements) for 8 dimensions 269

Figure 6: Diagram of Standardized estimates and standard errors

(12 dimensions) 271

Figure 7: Frequency graph of model modification indices

(BY Statements) for 12 dimensions 273

Figure 8: Frequency graph of model modification indices

(WITH Statements) for 12 dimensions 275
Teaching Excellence: Perceptions of Community College Students

Gary Robert Oesch

ABSTRACT

Numerous efforts to assess teaching excellence have been attempted, but systematic research has produced limited results at best. This study expanded upon recent studies focusing on how students’ perceptions and attitudes can be used to identify the best course environments and the qualities of teaching excellence. This is especially critical considering that most previous empirical research has been conducted at the university level, while community colleges have been mostly overlooked. Thus, little is known about community college students’ perceptions of teaching excellence. To assess their views of teaching excellence, a questionnaire was given to students from one community college to identify the underlying factors that are most central to teaching excellence (research question one). While some of the perceptions of community college students were similar to perceptions documented previously with university students, some perceptual differences were revealed.

Confirmatory factor analysis (CFA) was used to evaluate the goodness of fit when used with community college students of the eight original dimensions representing the factor structure similar to that of Herbert Marsh’s SEEQ (research question two). For research question three, a second confirmatory factor analysis was employed to assess goodness of fit using the modified 12-dimension version of the survey instrument. The CFA suggested at least a marginal or reasonable fit of the two proposed factor models.
with community college students. Finally, based on inconsistent findings of previous research, a fourth research question investigated whether demographic factors influence students’ perceptions of courses and teaching excellence. A multiple regression analysis of six demographic variables suggested that five variables (e.g., Age, Gender, Ethnicity, Reason for Attendance, Employment and Semester Hours completed) had some impact as to how students respond to certain items that make up the 12 teaching excellence dimensions. The $R^2$ values representing the teaching excellence dimensions ranged from .01 to .034. While many of dimensions had demographic predictor variables that were shown to be statistically significant, as effect sizes were small the practical significance of the results is probably minimal at best.

A discussion of the results, limitations, implications for future practice and research are discussed in Chapter Five of this study.
CHAPTER ONE

INTRODUCTION

The emergence of student-centered and learning-centered orientations in higher education (e.g., Barr & Tagg, 1995; Felder & Brent, 1996; Kolb, 1984; Thornberg, 1995) has stimulated a great deal of interest in learning more about how students learn as well as how students view their courses and their instructors. Both the student-centered and the learning-centered orientations strive to present courses that are academically beneficial and worthwhile for the student. Recently, renewed attention has also been placed on evaluating and assessing faculty effectiveness and teaching excellence. Although teaching excellence has become a core goal in higher education institutions, consensus on a definition of teaching excellence and ways to promote it are not clear.

Some authors avoid defining excellence in favor of offering illustrative examples that they believe encompass teaching excellence. Yoakam and Simpson (1948) suggested that quality teachers are "progressive," take into account past experiences of students, diagnose student difficulties, allow remedial activities, and "liberate" learners. Wotruba and Wright (1975), in one early study, summarized 21 prior investigations in which various groups had been asked to identify qualities of effective teaching or teachers. They listed qualities such as: (a) communication skills, (b) favorable attitudes, (c) knowledge of subject, (d) good organizational skills, (e) enthusiasm, (f) fairness, (g) flexibility, (h) encouraging to students, and (i) providing interesting lectures. Sorason, Davidson, and Blatt (1982) stated that excellence is the ability to adapt teaching
behaviors and techniques to the capabilities of students. A review of the research conducted over the past 30 years (Eison & Stephens, 1988) suggested that several classroom behaviors and instructor characteristics have been closely associated with teaching excellence. These behaviors and characteristics include: subject expertise, clarity of the material presented, instructor preparedness, instructor enthusiasm, sympathy, and humor. Marsh (1982a) posited that teaching should be evaluated along nine dimensions. These dimensions include: (a) learning, (b) enthusiasm, (c) organization, (d) individual rapport, (e) group interaction, (f) breadth, (g) assignments, (h) examinations, and (i) workload/difficulty. Marsh (1984) argued, "student ratings, like the teaching they represent, should be unequivocally multidimensional (e.g., a teacher may be quite well organized but lack enthusiasm)" (p. 709).

Sherman, Armistead, Fowler, Barksdale, and Reif (1987) stated that teaching excellence is manifested in many different ways. They further stated that five characteristics have been regularly attributed to college instructors who were judged excellent. The five characteristics are: (a) enthusiasm, (b) clarity, (c) preparation/organization, (d) stimulating interest and thinking about the subject matter, and (e) knowledge (i.e., the instructor's grasp of the subject matter and the instructor's love of and passion for the subject). In addition, the authors suggested that experience appears to be an important part of teaching excellence. Many instructors believe they will develop into progressively better teachers as they gain teaching experience. It appears that experience tends to gradually bring about more effective ways of teaching which manifest the aforementioned five characteristics of teaching excellence.
Carson (1996), in a qualitative study of former students, asked participants to provide narrative stories about teachers that personified teaching excellence. Carson stated that three clustering themes were reported as representative of teaching excellence. These themes include: (a) teachers who love what they teach, (b) teachers who respect and like their students, and (c) teachers who are committed to and skilled at connecting the two things they care about most -- their students and their subject matter.

While the authors and researchers cited above do not fully agree on every factor that contributes to teaching excellence, their descriptions clearly share a number of common elements. Many of these same authors would agree that there appear to be identifiable qualities and/or factors that separate excellent teachers from less competent and incompetent teachers.

Statement of Problem

One fundamental shortcoming of the literature investigating teaching excellence is that it has focused exclusively on assessing perceptions of university students and has failed to examine perceptions of community college students. Thus, one educationally significant and previously unanswered question is "how do community college students describe teaching excellence?" Secondly, many studies of teaching effectiveness and the student rating forms used in these studies were conducted during the 1970’s and 1980’s. In the 1990’s, research interest began to focus more on teaching excellence. Unfortunately, the majority of these empirical studies did not address several important concepts and teaching modalities (e.g., diversity, ethics/integrity, technology, and active learning) related to teaching excellence. Finally, prior studies have failed to explore to what degree various student demographic factors (e.g., ethnic background, age,
employment status, reasons for attending college, number of credit hours completed) are related to community college students’ perception of teaching excellence. It was the intent of the current research to address these core questions.

**Purpose of Current Study**

The primary purpose of this study was to examine student perceptions of teaching excellence at the community college level. Utilizing a modified version of the SEEQ - Student Evaluations of Educational Quality (Marsh, 1982b) survey form, this quantitative study examined the perceptions of students from one community college in an effort to determine qualities students view as essential to teaching and course excellence. The second part of the current study assessed the goodness of fit of community college students’ responses to a teaching excellence survey employing an eight factor model developed by Herbert Marsh in multiple studies with university students.

A thorough examination of previously published research literature reveals multiple studies examining teaching excellence but the vast majority of these studies have been conducted in university settings. It would appear that either researchers have used university students as a matter of convenience or they have implicitly assumed that college students (whether attending community colleges or universities) have similar views and beliefs about teaching excellence. The current research study, however, assumes that students enroll in these differing types of institutions for different reasons, and thus, may also differ in their perceptions of teaching excellence. It is important to note that this research was not a study of students' evaluation of their current professors, but rather sought to examine empirically what these students truly believe is at the heart of teaching excellence. A third research question employed a confirmatory factor
analysis to assess goodness of fit for a factor model built on the modified SEEQ with the addition of four new dimensions: (a) diversity, (b) ethics/integrity, (c) technology, and (d) active learning. An additional focus of the current study (research question four) investigated whether certain demographic factors (e.g., student age, gender, number of credit hours completed, reasons for attending the community college, ethnic background, employment status) were related to differences in students' perceptions of quality courses and teaching excellence.

The current research study is an extension of a previous study of student perceptions entitled Undergraduates' Views of the Best College Courses (Levy & Peters, 2002). In their study, Levy and Peters asked 105 undergraduate psychology students at a public university to complete a student-rating questionnaire that assessed their perceptions of the best college courses across three domains. The three domains included: the course (e.g., comfortable atmosphere, interesting content, reviews before an exam), the professor (e.g., sense of humor, entertaining, communicated well), and the student's role (e.g., students received the grade they deserved, was asked questions in class). These domains were previously identified as distinct categories by Long and Sparks (1997). Levy and Peters's sample consisted of 75 women and 30 men from one first-year psychology course and one second-year psychology course (Introduction to Psychology and Child Psychology; n= 60) and from one third-year and one fourth-year psychology course (Moral Development and Learning and Memory; n =45). With the exception of those students enrolled in the Introduction to Psychology course (a prerequisite course for becoming a psychology major; n = 32), all participants were psychology majors. Participation was voluntary and the questionnaires were anonymous.
Levy and Peters prepared a one-page questionnaire of 24 items drawn from previous research (Perlman & McCann, 1998) and faculty-student brainstorming; this was then distributed to participants in the 12th week of a 15-week semester.

The questionnaire was divided into three sections that were purported to assess the characteristics of best college courses regarding the course, the professor, and the student's role. The authors noted that the "three sections are based on the subjective impressions of the authors and not on any empirical research" (p.47). The questionnaire used a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree) and asked students to rate how well or how much each of the 24 characteristics helped to create the best college course.

Results of this study were consistent with earlier works reported in the published literature (e.g., Caplow, Wedman, & Wedman, 1995; Long & Sparks, 1997; Marsh & Ware, 1982). In relation to section one (course related items), Levy and Peters found that the best college courses are ones that have a "comfortable atmosphere, interesting course content and reviews before exams" (p. 47). The authors unfortunately, did not provide a clear definition of comfortable atmosphere or interesting course content. Students did not rate easy course among the best college courses. On average, students rated easy courses and courses not requiring a presentation by the students as neutral. Additionally, Levy and Peters found that students rated courses low if courses did not include class activities and student presentations. However, Levy and Peters found that students rated courses higher if they were not forced to participate in classroom activities (e.g., ad hoc in class questioning). This finding is consistent with the findings of Beishline and Holmes (1997). Findings unique to this study revealed that students had mixed reactions to in-class
presentations, questions, and activities. A survey item related to students being asked questions in class was rated negatively. The findings suggest that while students value courses with classroom activities, they tend to dislike being asked questions in class.

In the section that assessed students' perceptions of characteristics of instructors, Levy and Peters discovered that a relationship exists between students' perceptions of instructors’ personality and how they rated the course overall. This is consistent with previous research conducted in this topic area (e.g., Marsh, 1984; Marsh & Ware, 1982; Murray, 1983; Weisz, 1989). Professors of the best college courses were found to have a sense of humor, be entertaining and excited about their material, exhibit a caring attitude toward students, and were approachable. This too is consistent with previous research (e.g., Long & Sparks, 1997; Mueller, Roach, & Malone, 1971; Murray, 1983; Waters, Kemp, & Pucci, 1988). Courses and professors who were rated highly employed a variety of teaching techniques and did not simply utilize lectures all the time. These findings are similar to the findings of previous studies (e.g., Beishline & Holmes, 1997; McKeachie, 1994; Weisz, 1989). Courses with professors who lecture only were rated low, while courses were rated higher when the professor employed a variety of teaching methods. Students reported that obtaining the grade they believed they deserved and getting a good grade were important elements of a quality course. Finally, students reported that they wanted to take courses in which the professor made them feel smart.

In relation to the section that assessed students' perception of their roles in a course, participants rated courses where they were asked questions as low. While
students want courses with class activities, their attitudes were mixed when it came to in-class presentations.

The authors suggested that the results provide psychology instructors with valuable insights for evaluating, revising and improving their teaching and their courses. For example, they advised professors that students are sensitive to characteristics of instructor personality and associated teaching efforts. Students especially value courses in which they feel comfortable, in which they are interested, and where they are taught by exciting and entertaining faculty members. Finally, while students welcome participating in courses, they do not like forced participation.

Although this study was both personally useful and interesting, it was severely limited in sample size (n=105 students at a public Rocky Mountain university) as well as limited by several methodological issues. First, is the concern that social desirability may have influenced the results. Although questionnaires were anonymous, all participants who returned questionnaires were eligible for a raffle with various prizes. Obviously, the researchers knew who participated in order to have student names for the raffle. It is possible that students may have answered questionnaires in socially desirable ways because of a belief that their professor might have known who they were. Second, there are concerns regarding the overall validity of the scores from the survey instrument employed (e.g. items were drawn from both previous research and faculty-student brainstorming, while the three sections of the instrument were based on the subjective impressions of the authors). Third, a large percentage of the statements used in the questionnaire were not operationally defined and appear vague in nature. The authors, for example, did not adequately define or delineate terms such as “comfortable
atmosphere" or "interesting course content." Finally, the authors noted, "some components of the findings may be due to the specific sample of students who participated in the study" (p. 48).

The current study was built constructively on some of the elements of Levy’s and Peters’s research as well as the extensive research of Herbert W. Marsh (e.g., 1982a, 1982b, 1984, 1987) to examine students' perceptions of teaching excellence and quality courses. Further, this study attempted to overcome some of the methodological and operational shortcomings noted in previous research attempts to explore students' perceptions of teaching excellence.

The important focus of the current study was that it examined community college students' perceptions of teaching excellence and quality courses. While numerous large-scale studies (e.g., Caplow, Wedman, & Wedman, 1995; Eison & Stephens, 1988; Greimel-Fuhrmann & Geyer, 2003; Marsh, 1983) have investigated teaching effectiveness and excellence, nearly all of these studies have been conducted at the university level. Although community college students have not been included in these large-scale educational studies, the few studies that have been conducted with community college students (e.g., Cravens, 1996; Yankowski, 1992) have typically utilized small samples and/or were discipline dependent. This research study, therefore, was designed to assess community college students' perceptions of quality courses and teaching excellence, while controlling for social desirability through the use of an anonymous survey. Validity and reliability concerns were be minimal, as the current study employed a modified version of an instrument (SEEQ) that has been extensively used for over 30
years. Additionally, concerns about discipline dependency were overcome through the use of multiple classes across disciplines.

Why have major empirical studies not previously addressed community college students' attitudes, beliefs, and perceptions about teaching excellence? I postulate (for the purpose of this study) that researchers generally view college students as a relatively homogeneous population. It is my speculation based on 15 years of community college teaching experience that students at the community college level are, in fact, different in their perceptions and attitudes from students attending public and private universities. Students attend each institutional type for various reasons and it stands to reason that their expectations, attitudes, beliefs, and perceptions about instructors and instruction may differ as well. Since much more is known about university students' perceptions of teaching effectiveness and teaching excellence, this study focused on a population (community college students) about which we know little.

An additional focus of the present research investigated whether certain demographic factors (e.g., student age, gender, number of credit hours completed, reasons for attending the community college, ethnic background, employment status) may be related to students' perceptions of quality courses and teaching effectiveness. These factors have been frequently examined in previous research. Demographically, community college students tend to be different from university students. For example, according to the American Association of Community Colleges (2002), community colleges tend to attract significantly more non-traditional students (i.e., over 25 years of age, mid-career students, and students who are retooling) compared to other institutional types. Community college students tend to be older, commuters rather than resident
students, more likely to be employed full-time, have greater family obligations, and less time for participation in co-curricular activities. The present research investigated whether any demographic factors are related to students' perception of teaching excellence. It is postulated that differences will be noted in perceptions of teaching excellence types when analyzing these demographic factors.

To achieve the current study's stated purpose, a questionnaire modeled after the Student Evaluation of Educational Quality (SEEQ) developed by Herbert W. Marsh in 1976, was administered to all participants. The five-page questionnaire was comprised of 13 sections (a seven item demographic section developed by the researcher, seven subsections containing 29 items from the SEEQ developed by Marsh, and four subsections containing 16 new items addressing issues of diversity, ethics/integrity, technology, and active learning). An outline of the 12-section instrument can be found in Appendix A. Participants used a 5-point scale ranging from 1 (of no importance) to 5 (of critical importance) to evaluate the extent to which each of the 45 items is crucial to teaching excellence. Participants in this research were students in Introductory to Psychology courses and other general education courses (e.g., Humanities, English Composition, Biology, and College Algebra) at a community college in the west central part of the State of Florida. While the sample drew largely from students primarily enrolled in Introduction to Psychology courses, the sample also included students from a variety of majors, not just Psychology majors. Psychology courses are general education requirements or electives, are extremely popular, and draw students from a wide variety of majors and departments. Several other general education courses (non-psychology) were included in the sample as well. Certain majors (e.g., computer sciences, business,
and engineering) do not take Introduction to Psychology courses in their required curriculum. The inclusion of other general education courses (in addition to Psychology) allowed students from these disciplines to participate in the proposed research. Data collection took place during weeks ten through twelve of the fall 2004 semester at the community college.

Research Questions

Specifically, the study was designed to explore the following questions:

1. Based on community college students' perceptions, what instructor qualities or course attributes, as deemed by Marsh's SEEQ (1982b) and the additional items that have been added to this survey, are most central to teaching excellence?

2. Does the underlying factor model of the perception of teaching excellence held by community college students fit the factor structure model (consisting of eight dimensions) previously established with university students using the SEEQ (Marsh, 1991)?

3. Does the factor model consisting of 12 dimensions (including the four dimensions of Diversity, Ethics, Active Learning, and Technology not included in the original SEEQ) fit the data from community college students?

4. Do community college students' demographic characteristics (i.e., gender, age, number of credit hours attempted, full or part-time student, reasons for attending the community college, employment status, and ethnic background) relate to perceptions of teaching excellence?

It was anticipated that results for the first research question would not be similar to previous research that have investigated teaching excellence with university students.
It was expected that community college students would identify different attributes related to teaching excellence than university students reported in past studies. Previous research has suggested that certain factors are related to perceived teaching excellence (this will be discussed in the literature review of Chapter Two). Relative to the second research question, it was hypothesized that a confirmatory factor analysis would suggest that the factor model (determined by prior research studies using the original version of the SEEQ) and the factor model of community college students would differ. Therefore, if community college students’ responses did not fit the proposed factor model, adjustments to the model would be necessary to achieve better fit. The analysis of the third research question used confirmatory factor analysis to assess goodness of fit of community college students’ perceptions of teaching excellence with a modified form (adding four dimensions related to diversity, ethics/integrity, technology, and active learning) of the SEEQ. It was the researcher’s speculation that community college students’ perceptions of teaching excellence would not fit the 12 dimension factor model that is created with the addition of the four new dimensions. In relation to the fourth research question, it was expected that demographic variables might be related to differences in perceptions of teaching excellence, especially those factors like gender, age, employment status, and reasons for attending the community college, and number of credit hours obtained.

Significance of the Study

Through knowledge of how students view courses and perceive teaching excellence, instructors and administrators at community colleges can get a clearer picture as to what students believe contribute most to course/instructor quality. Additionally,
instructors could identify specific ways to modify and improve their own courses accordingly. Currently, many colleges use locally developed or home-grown course evaluation instruments that do not provide faculty with clear information about student attitudes and perceptions that can contribute to curricular development and/or instructional improvement. Findings based upon the survey instrument employed in the current study can yield helpful information (e.g., students think humor, varied teaching techniques, and interactive classroom are important for teaching excellence) to aid in the development of new or improved courses. Although the survey instrument used in the current study was based upon what has been previously shown to be important to university students, it has yet to be used in a large-scale study of community college students. As will be seen in the literature review presented in Chapter Two, a limited number of studies have investigated the relationship between student course ratings and what students believe contribute most to their sense of teaching excellence. The current investigation expanded our knowledge of students' perceptions of teaching excellence, especially related to the perceptions of community college students.

Limitations of the Study

There are several potential limitations to the current study. These include limitations related to the use of student perceptions, the sample and the instrument.

One potential limitation of the current investigation relates to the use of student perceptions as a tool to measure teaching excellence. Some might suggest that students may have unsophisticated views of teaching excellence when compared to the views of faculty, faculty development professionals, or educational researchers. Use of student input provides only one source of information when other potential sources exist.
A second limitation of this study involves the sample that was used. This study was conducted with a large sample consisting of students enrolled in one community college in Florida. These students, faculty and courses might differ in some ways from other college and university students, faculty and courses elsewhere. If so, these differences might influence how the present results should be interpreted. Further, the study did not employ the use of random sampling and depended upon nested data. Therefore, a lack of independence resulted through the use of the community college student sample. Additionally, the sample used and the design of the study did not allow direct comparisons of community college and university students with regard to their perceptions of teaching excellence. Therefore, it is difficult to say with any degree of certainty that community college or university students are either similar or dissimilar in their perceptions of teaching excellence. Although, the author of the current study has made an effort to compare previous research results with those obtained in the current study, it is impossible to make a true comparison of these two populations without directly measuring both populations with the same instrument. Any assertions made by the author of the current study are best viewed as conjecture based on the similarities of past and current research. A future study utilizing both community college and university students measured by the same instrument is recommended to determine if any statistical differences exist in the perceptions of teaching excellence among and between these groups.

The use of a questionnaire was the third limitation in this study. The use of this technique allowed participants only an opportunity to rate factors included on the survey instrument. It did not allow participants to explore other avenues and to voice other
factors that might be related to teaching excellence. If the original SEEQ instrument included additional questions related to course or instructors, the results might be influenced. With the use of a modified version (questions related to diversity, ethics/integrity, technology, and active learning added for the proposed study) of the SEEQ that has been widely tested empirically (e.g., Marsh, 1982a, 1982b, 1984, 1987), it was hoped that any concern about the questionnaire as a limitation would be minimized. However, it is impossible to truly determine whether this limitation was eliminated in the current research. A survey with open-ended questions might serve to eliminate some of the concerns related to a forced choice type of survey. However, the use of an open-ended survey was beyond the scope of the current research as it was developed using the SEEQ instrument as a guide. The SEEQ is a forced choice instrument and modification of the instrument would have been cumbersome and would have brought to light a number of validity and reliability issues that would have required a major test construction effort that is beyond the scope of the current study.

Organization of the Study

The presentation of the current study will be organized around five chapters. The first chapter includes an overview of the topic under study and the research questions that will be addressed. Chapter Two contains a review of the current literature related to student evaluations and how evaluations relate to the assessment of teaching excellence. This chapter also includes literature related to the reliability and validity of using student evaluations for decision and policy making at the course and institutional levels. The methods for the study, including sample selection procedures, the instrument employed in the study, and the procedures used to collect and analyze the data are discussed in
Chapter Three. The results of the study are reported in Chapter Four. A discussion of the results and their implications for practice are offered in the final chapter.
CHAPTER TWO

LITERATURE REVIEW

The purposes of this quantitative study are to (a) examine community college students’ perceptions of teaching excellence; (b) examine the underlying factor structure of the perceptions of teaching excellence held by community college students to determine goodness of fit against a factor structure previously established with university students using the SEEQ (Marsh, 1991); (c) examine the underlying factor structure of the perceptions of teaching excellence for community college students with the addition of four dimensions not included in the original SEEQ; and (d) examine whether community college students' demographic characteristics relate to perceptions of teaching excellence. This study grew out of and will expand upon one recent study (Levy & Peters, 2002) that examined the use of course evaluations to identify characteristics of the best college instructors and courses. Further, this study attempted to overcome an important limitation found in the educational research literature; while many studies have examined teaching excellence, the vast majority of these studies have used only university students in their samples. Thus, the current research investigated community college students' perceptions of teaching excellence. It was this researcher's intuition that community college students’ perceptions of teaching excellence differ from those of their university counterparts as reported in previous research.

The purpose of this literature review is to address five topic areas crucial to the current study. First, the concept of effective teaching and the components that make up
teaching excellence are explored. Second, the use of student evaluations/surveys to
determine instructor and course effectiveness is discussed. Third, various tools designed
to measure instructor and course effectiveness will be described and the validity and
reliability of the scores from these instruments will be discussed. Fourth, prior studies
designed to identify the factors that contribute to effective courses will be examined.
Finally, because the proposed study purports that there are perceptual differences
between university and community college students, it is important to consider the
composition of the student populations at the two institutional types.

The Use of Student Evaluations to Assess Quality Instruction

Student evaluations/surveys of instruction were first introduced into North
America universities in the 1920's (Doyle, 1983). These ratings and evaluations have
been the subject of a large body of literature. This literature has examined both the
psychometric properties of student evaluations and the factor structure of such
evaluations, as well as provided many practical guidelines to be followed when
conducting faculty evaluations. As college instructors and administrators have become
increasingly concerned about the instructional quality of the courses students receive, it
has become increasingly important to ask: how can we empirically identify and verify the
attributes and qualities essential to instructional effectiveness and excellence throughout
higher education?

Defining Teaching Excellence

Efforts to assess attributes that are central to instructor effectiveness have been
discussed in the literature for many years, as numerous writers have described what they
perceive teaching excellence is and is not. Eble (1983), for example, addressed the seven
deadly sins of teaching. Eble stated that the deadly sins of teaching are Arrogance, Dullness, Rigidity, Insensitivity, Self-Indulgence, Vanity, and Hypocrisy. Instructors who commit these sins, Eble asserted, hinder student learning and squash any hope for teaching excellence. Interestingly, many studies have revealed that the qualities students rate highly for contributing to teaching excellence are the exact opposite of the sin qualities as delineated by Elbe. Murray (1985), for example, found that the highest rated instructors were those who spoke emphatically, used humor, were friendly and were easy to talk to, were tolerant of others’ viewpoints, and showed concern for student progress. Sherman, Armistead, Fowler, Barksdale, and Reif (1987) suggested that excellent instructors possess qualities such as enthusiasm, are concerned about clarity in their classroom presentations, and stimulate interest and thinking about the subject matter.

As reported in Seldin (1999), R. I. Miller developed the following definition of effective teaching:

*Effective teachers personify enthusiasm for their students, their area of competence, and life itself. They know their subject, can explain it clearly, and are willing to do so --in or out of class... Class periods are interesting and, at times, alive with excitement. They approach their area of competence and their students with integrity that is neither stiff nor pompous, and their attitude and demeanor are more caught than taught* (p. 156).

Seldin asserted that many students, faculty, and academic administrators would agree with this definition of teaching excellence and that this definition touches on many of the factors that prior research has shown to be related to teaching excellence.

The literature is full of both qualitative and quantitative studies that have
addressed the issue of teaching excellence and instructor effectiveness. Carson (1996), for example, reported the findings of a qualitative review of student impressions and perceptions of teaching excellence. Carson collected data by asking students who graduated from Rollins College between the years of 1964 and 1990 to reflect on instructors that they (the students) held in high regard. The author asked students to describe in detail specific incidents or other details (from inside the classroom and outside) that contributed to their high regard. Two hundred twenty-two alumni responded to her request for information. Carson found that the alumni responses were clustered into three themes: a) excellent instructors love the subjects they teach; b) excellent instructors respect and like their students; and c) these instructors are skilled at connecting the two things they care deeply about— their subject matter and their students.

In another qualitative study of students’ perceptions of quality in higher education, researchers made use of focus groups involving a range of higher education students (Hill, Lomas, & MacGregor, 2003). In this study, the sample consisted of six focus groups composed of pre- and post-registration nursing students, two diploma in management studies groups and a group of postgraduate certificate in learning and teaching students at a university college in the United Kingdom. Data was collected from focus groups who answered the question “What does quality education mean to you?” Four common themes emerged from the focus groups in relation to what students’ perceived to be quality education. Theme one (Quality of the lecturer) included comments related to (a) delivery in the classroom, (b) feedback to students during class sessions and related to assignments, and (c) relationship with students in the classroom. Theme two (Student engagement in learning) included comments such as: “appropriate
content to course” and “being introduced to new perspectives.” Theme three (Social/emotional support systems) included comments such as: “Student support unit” and “course valued by the workplace.” Theme number four (Resources of library and IT) included comments related to students having a readily available library and IT services. The main conclusion from this study was that the quality of the instructor and student support systems are the most influential factors in students’ perceptions of educational quality.

In reporting the results of an extensive literature review, Sherman, Armisted, Fowler, Barksdale, and Reif (1987) believed that five characteristics truly defined teaching excellence. The five characteristics were: (a) Enthusiasm; (b) Clarity of presentation; (c) Preparation and organization; (d) Stimulation of interest and thinking about the subject matter; and (e) Knowledge, which can be broken down into two parts (the teacher's grasp of the subject matter and the teachers love of and passion for the subject). Seldin (1999) stated that based on his own experience and his study of others' experiences, effective teachers:

1) *treat students with respect and caring*;
2) *provide the relevance of information learned*;
3) *use active, hands-on student learning*;
4) *vary their instructional modes*;
5) *provide frequent feedback to students on their performance*;
6) *offer real-world, practical examples*;
7) *draw inferences from models and use analogies*;
8) *provide clear expectations for assignments*;
9) create a class environment which is comfortable for students;
10) communicate to the level of their students;
11) present themselves in class as "real people";
12) use feedback from students and others to assess and improve their teaching;
and
13) reflect on their own classroom performance in order to improve it.

Missing from scholarly writing and research on teaching excellence has been discussions of several dimensions that have been addressed only recently in the teaching excellence literature. These new dimensions include: (a) diversity; (b) technology; (c) ethics/integrity; and (d) active learning. It is this researcher’s opinion that these dimension are important to teaching excellence and that new evaluation surveys need to include items related to these dimensions. A brief summary of literature about these dimensions is presented here.

Diversity Related Dimension

Over the past two decades major changes have taken place in curriculum and pedagogy on our college campuses. One of the educational reforms that has taken place is that increasing numbers of faculty and administrators have recognized the importance of gender, race, and ethnicity in our society. Bronstein and Quina (1988) asserted that “as individual teachers, we have an intellectual and ethical responsibility to provide our students with the most current and accurate information possible” (p. 5). Traditionally, these issues have been either ignored or given little importance in curriculum and instructional methods. It has become increasingly important to infuse gender, race, and ethnicity into course curriculum.
Perlman (1998) found that students cited bias, sexism, and racism as major concern to and common pet peeves. Chism (1999) suggested that to help students succeed, institutions must: (a) make students feel welcome and honor and include their perspectives and experiences; (b) treat students as individuals, rather than representatives of a social group; (c) make sure that students from diverse backgrounds have ample opportunity to participate in all class activities; and (d) strive for fair treatment through the use of appropriate communications. Piland, Hess, and Piland (2000) found that community college students desire courses with multicultural and diversity content. Additionally, these authors suggested that courses that include diversity topics enhanced the understanding of differences between people. Finally, Piland et al. suggested multicultural content, information concerning gender, sexual orientation, ageism, classism, and disabilities should be included in course contents. Rouche, Milliron, and Roueche (2003) suggested that instructors should be respectful of diversity and for each student’s feelings of self-worth. Sheehan and DuPrey (1999) and Kolitch and Dean (1999) found diversity to be such an important issue in higher education today that they included diversity items in student evaluation forms in their research studies.

*Technology Related Dimension*

Findley (1995) stated that the appropriate use of supporting materials (multimedia, audio-visual and other educational resources) is an important and necessary element of teaching effectiveness. Chickering and Ehrmann (1996) called for the use of communication and information technology to be employed in ways that were consistent with the seven principles of good practice (Chickering & Gamson, 1987). According to these authors, technology can empower students, but it must be used
appropriately. Chickering and Ehrmann described some of the most cost-effective and appropriate ways today’s technology can be used to advance their seven principles and to an active learning environment. Laurillard (1999) suggested that new technology can support learning and that faculty should exploit its use. The author stated that many faculty members are not using the technology that is available. Laurillard suggested that technology is an important portion of teaching excellence in the 21st century. Additionally, Roueche, Milliron, and Roueche (2003) stated that the bridge between classroom instruction and technology needs to be strengthened. These authors suggested an important link between perceived teaching excellence and those instructors that keep up to date and utilize the latest technology to enhance learning.

*Ethics/Integrity Related Dimension*

Over the last 20 years, numerous studies have reported extremely high rates of academic dishonesty and cheating among higher education students (e.g., Brown, 1995; Davis 1993; Jendrek, 1992; Moffatt, 1990). Moffatt (1990) reported that as many as 33% of students surveyed stated that they had copied off another student’s exam. Of student survey respondents, 21% reported that they had studied with the help of a past exam and 18% reported using a cheat sheet. Brown (1995) reported that 81% of students responding to a survey acknowledged having participated in at least one unethical practice more than “infrequently.” Due to the high rates of academic dishonesty, it is becoming increasingly important for faculty and institutions to address this problem. Interestingly, Aaron (1992) reported the results of a survey in which 175 academic officers were asked how their respective institutions were addressing academic dishonesty with students. While more than 95% of the institutions had academic codes, only 79% described those
codes in the student handbook, 42% in the college catalog, and 30% in a separate brochure. Less than 8% of faculty addressed student academic dishonesty through a classroom discussion or in a syllabus.

Svinicki (1999) suggested that teaching excellence is inherently linked to faculty members following through with their ethical responsibilities to students. Svinicki outlined six main principles for faculty to follow in their responsibilities to students. These principles include: (a) encourage the free pursuit of learning; (b) demonstrate respect for students; (c) respect confidentiality; (d) model the best scholarly and ethical standards; (e) foster honest academic conduct and to ensure fair evaluation; and (f) avoid exploitation, harassment, or discrimination. These ethical principles should be discussed with students and faculty members should model ethical behavior throughout the teaching careers.

Active Learning Related Dimension

Finally, active learning is a dimension that plays a major role in teaching excellence. Chickering and Ehrmann (1996) stated that learning should not be a passive activity. These authors supported the idea that students “must talk about what they learn, write reflectively about it, relate it to past experiences, and apply it to their daily lives” (p.4). Chickering and Ehrmann called on administrators, faculty members and students to develop and implement active learning strategies in the classroom.

Bonwell and Eison (1991) stated active learning involves students doing things and then having the students think about what they are doing. Active learning strategies involve (a) critical thinking; (b) creative thinking; (c) working with partners; (d) expressing ideas through writing; (e) exploring one’s values and attitudes; (f) giving
and receiving feedback; and (g) reflecting upon the learning process. According to Bonwell and Eison, when an instructor incorporates active learning techniques in the classroom, instructors typically (a) spend more time helping students to develop understanding and skills and (b) allow students to apply/demonstrate what they have learned and to receive immediate feedback from their peers and their instructor. Active learning is an alternative to traditional lecture strategies often employed in college classrooms.

Myers and Jones (1993) provided an overview and suggested practical institutional strategies and techniques for using active learning approaches in college classrooms. Additionally, these authors provided strong support for this technique over traditional classroom teaching modalities. Bean (1996) promoted the idea of active learning through the use of writing assignments. Bean emphasized the connection between writing and thinking. This author’s book is designed to provide help to instructors in designing interest provoking and critical thinking activities that can be incorporated into their course. Faust and Paulson (1998) reported that active learning techniques have numerous academic advantages, with students reporting that active learning helped them to better understand course materials. Faust and Paulson also reported that active learning has been shown to produce both social and psychological advantages to students. These advantages include: (a) improved student attitudes; (b) cooperation among students; (c) interdependence and support among students; and (d) improved student retention. Faust and Paulson outlined many active learning techniques aimed at fostering learning, including group activities and writing exercises. Millis and Cottell (1998) explored practical applications of cooperative learning
instructional techniques in higher education. These authors provided a comprehensive look at the underlying rationale for cooperative learning as well as providing a summary of the research that supports the use of cooperative learning in college classrooms.

Excellence versus Effectiveness

A clear distinction between teaching effectiveness and teaching excellence is not always easy to recognize as obvious overlaps can be found. Kreber (2002) suggested that teaching excellence goes beyond teaching effectiveness. Kreber stated that excellence involves a scholarly activity that requires a “sound knowledge of one’s discipline as well as a good understanding of how students grow within, and perhaps even beyond, the discipline” (p. 9). Excellent teachers know how to motivate students, how best to convey concepts, and how to help students who have difficulty in their learning. Mentkowski and associates (2000) reported that excellent teachers derive their knowledge of how to teach from active experimentation and reflection on personal experience. As reported in previous sections, diversity issues, ethics/integrity, technology, and active learning techniques have also been shown to be related to the concept of teaching excellence. Therefore, for the purposes of the current study, the concept of teaching excellence incorporated all the above elements when assessing students’ perceptions of teaching excellence.

Use of Student Evaluations to Determine Excellence

Many researchers have explored the structure of student ratings of instructional effectiveness. A number of student evaluation questionnaires and instruments have been developed in the last several decades. Multidimensional evaluation forms, such as the Student Instructional Rating System (Michigan State University, 1971), the Student
Instructional Report (Linn, Centra, & Tucker, 1975), and the Students' Evaluation of Educational Quality (Marsh, 1982b) exist that contain items tapping into specific dimensions. These instruments typically include overall global items assessing students' overall impression of the course, the instructor, and the value of the course.

d'Apollonia and Abrami (1997) stated that items on student evaluation forms "reflect the characteristics that experts believe (a) can be judged accurately by students and (b) are important to teaching" (p. 61). Researchers, however, have defined instructional effectiveness from a number of different perspectives. These definitions tend to focus on either (a) aspects of the instructional process (e.g., preparation of course materials, provision of feedback, and grading) or (b) products that effective instruction promotes in students (e.g., subject-matter expertise, skill in problem solving, and positive attitudes toward learning). Abrami and d'Apollonia (1990), in an earlier study, examined the consistency and uniformity of student evaluation forms used in multisection validity studies by coding and analyzing their items. These researchers concluded that student evaluation forms that purported to measure instructional effectiveness were not consistent in their operational definitions of instructional effectiveness. This means that no one evaluation form has been found to represent effective instruction across differing contexts. d'Apollonia and Abrami (1997) thoroughly summarized factor analysis studies of individual student evaluation forms and described the different approaches used to obtain student ratings of instructional effectiveness. d'Apollonia and Abrami concluded that factor analytic studies do not provide irrefutable evidence that student evaluation forms measure distinct instructional factors. In fact, the authors' interpretation is that student evaluation forms measure a global component, or "General Instructional Skill."
McKeachie (1997) asked the logical question "How many dimensions of teaching should student rating forms report?" According to the author, the answer depends upon what one wants to do with the ratings. If administrators are interested in improving teaching, the primary purpose of the student ratings is to provide feedback to teachers that will be helpful for improvement. In such instances, McKeachie believed that specific questions can provide useful data while overall ratings provide faculty members with little guidance.

Marsh (1982b) suggested that to truly evaluate instructors and courses, rating scales must be multidimensional. Marsh's research has pointed to nine dimensions that should be included in any evaluation of instructor effectiveness. These nine dimensions include: (a) learning, (b) enthusiasm, (c) organization, (d) individual rapport, (e) group interaction, (f) breadth, (g) assignments, (h) examinations, and (i) difficulty/workload. Marsh (1984) argued, "student ratings, like the teaching they represent, should be unequivocally multidimensional (e.g., a teacher may be quite well organized but lack enthusiasm)" (p.709). A complete discussion of the rationale for multidimensional ratings is reported in Marsh (1984). Marsh's Student Evaluations of Educational Quality (SEEQ) survey form reflects these dimensions and will be discussed in detail later, as it is a major component of the survey instrument used in this research study.

Various university based studies have sought to identify the characteristics of effective teaching by soliciting student input regarding the behaviors of an ideal professor (e.g., Mueller, Roach, & Malone, 1971; Gadzella, 1977; Gadzella, Tomcala, Fullwood, Lytton, & Benton, 1982; Sckeck & Bizio, 1977). Some studies have focused on a particular teacher attitude, such as caring, that is perceived to foster a positive climate for
learning (Fox & Schaefer, 1995). Other studies have asked students specific questions about teaching behaviors that they find most helpful (e.g., Caplow, Wedman, & Wedman, 1995; Keller & Rabold, 1990). These studies have focused on directly linking the use of student evaluation of instructors and courses to the identification of behaviors associated with effective teaching.

Young and Shaw (1999) conducted a study that addressed how teaching effectiveness is defined. Using a 25-item instrument, 912 university students were asked to rate a teacher of their choice from whom they had taken a course in the past. The analysis of the data from this study suggested that (a) value of the course, (b) motivating students to do their best, (c) creating a comfortable learning atmosphere, (d) course organization, (e) effective communication, and (f) a concern for student learning accounted for 87% of the variability in the criterion of teacher effectiveness. Spencer and Schmelkin (2002) asked a random sample of 500 private university students (125 students from each of the following grades levels: sophomores, juniors, seniors, and graduate students) to complete a Course and Teacher Rating (CTR) instrument. This CTR was the standard teaching evaluation form used regularly by the university in all course sections. In analyzing the returned response forms, Spencer and Schmelkin found that (a) issues of clarity, (b) fairness and respect for student, (c) a willingness of faculty to interact with students, (d) accommodating for student special needs, (e) giving feedback, sensing when students were having trouble with material, and (f) knowing the student by name as important to student ratings of teaching effectiveness.

Greimel-Fuhrmann and Geyer (2003) combined both qualitative and quantitative data collected at Austrian commercial colleges to identify factors related to high quality
and low quality instruction. The empirical results were based on qualitative interviews with 40 students and a quantitative survey of 2,121 students who were asked to evaluate accounting teachers. The qualitative interviews were semi-structured and utilized open-ended questions. The quantitative component of the research utilized a questionnaire (which contained nine items to measure global ratings of teachers). The analysis of qualitative data showed that students characterize good teachers as (a) giving explanations by giving examples, (b) being willing to answer student questions, (c) utilizing multiple teaching methods, (d) adapting to students’ level of understanding and (e) being concerned about the students' progress in the course. Further, a good teacher was described as (a) humorous, (b) not too strict or too lenient, (c) friendly, (d) patient, and (e) a fair grader. Student rated poor teachers as possessing traits that were opposite of the traits given to good teachers. The authors state "monotony seems to be the best description of a poor teacher's lesson" (p. 232). Quantitative analysis of the study results showed that students' global evaluations of their instructors depended mainly on the "subject-oriented teaching behaviour" (e.g., 'gives explanations that I can easily understand', 'gives concrete examples to explain', 'repeats explanations if necessary', and 'presentations are logically structured').

The identification of effective teaching methods has been one area of recent research efforts. Rallis (1994) conducted a study in the form of a classroom assessment that obtained student feedback on quality teaching. Rallis asked students, "What are your pet peeves about college instructors?" This type of research procedure had several strengths. This type of assessment allowed students to feel like their opinions were needed and appreciated. The method allowed instructors to make immediate changes in
their courses and their teaching methods based on the feedback they received from the assessment tool. Finally, this evaluation was easy for instructors to administer and read. The Rallis research provided lists of pet peeves noted by teacher education students at a regional university. Appleby (1990), in similar study, investigated students’ perceptions of irritating faculty classroom behaviors at a small private college. Appleby suggested that faculty members are not always conscious of their habits, which included telling funny jokes, keeping students past the end of class, and making the same point repeatedly.

Perlman and McCann (1998) expanded on the Rallis study by addressing larger sample sizes with students attending psychology classes at a public college and describing how evaluations could be used to facilitate faculty teaching improvement. Perlman and McCann also addressed the differences in pet peeves between under-class and upper-class students. The study revealed that (a) organization and planning, (b) mechanics, (c) lecture styles and techniques, and (d) testing were the most frequently reported concerns of students. These were concerns that could be easily addressed and fixed. Eleven of the 13 faculty members who participated in this study made voluntary changes in their teaching within one week of the data collection. All 11 faculty members continued these changes during a two-semester follow-up.

Several authors have discussed teaching styles preferred by students. Hudak and Anderson (1984) discussed the connection between instructional styles and student ratings. These authors found that good didactic (lecture oriented) instructors received praise from students. Ferguson (1992) stated, although women students prefer the interaction teaching styles of women faculty members, they are commonly forced to
adapt their preferred learning style to the lecture styles of male faculty members.

Ferguson also noted women and minority students must adapt their learning style to less preferred styles. Ferguson reported the least preferred method of instruction was the lecture method. McKeachie (1994) advocated that a variety of teaching techniques should be available to students. McKeachie found evidence to suggest that student discussions were favored by those students who responded to a research questionnaire.

Beishline and Holmes (1997) asked Emporia State University and Weber State University students what style of teaching they preferred or specifically disliked. The researchers found that the majority of students prefer a lecture format as long as other techniques are also employed (i.e., student discussions or demonstrations). Students felt that they should learn from an expert and that lecture was the most effective way to teach information. Further, students did not like lecture only classes because it is hard for them to maintain interest. Students preferred not to be forced to participate in class if they choose not to do so. Additionally, students did not like classes in which other students were responsible for making presentations. They felt that other students did not have the expertise about the subject to teach it. These researchers also delineated findings that revealed sex differences in student classroom preferences. Males appeared to prefer professor-assisted discussion more than females did. Females showed a greater dislike for student presentations.

Waters, Kemp, and Pucci (1988) investigated the faculty characteristics that lead to high and low faculty evaluations. The authors' goal was to obtain a student-generated list of teacher characteristics that are most perceptually distinct to students. The researchers asked a total of 100 university students to think about two or three teachers to
whom they had given their highest and lowest evaluations. They were asked to write down those aspects of the teacher or course that had most influenced their evaluations. All the student responses were sorted into three broad areas of categories: (a) Personal characters, (b) Class characteristics, and (c) Interpersonal characteristics. The results suggested that, in general, personal responses described or inferred motivational characteristics (e.g., enjoyment, enthusiasm, sense of humor, personable, indifferent, no personality, aloof). Class responses described what went on in the classroom (e.g., open to questions, organized, well-prepared, fair, boring, read from book, often late or absent). Interpersonal responses described interactions with one or more students outside the classroom environment willing to help, cares about students personally, hard to talk to, makes students uncomfortable). Teachers who received the highest evaluations were typically praised for personal and motivational characteristics, such as personality, sense of humor, enthusiasm, and the enjoyment of teaching. Teachers who were criticized for issues related to classroom behaviors received lower evaluations. These behaviors included: discouraging classroom participation, coming to class late or not at all, and lecturing without varying the class routine. Interpersonal characteristics, such as learning students’ names and helping students outside of class were also reasons for teachers being given high evaluations. The opposite of the aforementioned characteristics were often found to be reasons for low evaluations. Waters et al. (1983) concluded that, when asked to think about the best and worst of instructors, students tend to assign positive personal (and perhaps interpersonal) qualities to the best and tend to give the worst teachers a more impersonal evaluation related to classroom management. The results indicated that the best faculty can be evaluated differently from the worst faculty.
Finally, Waters et al. found that characteristics which lead to high evaluations did not necessarily have "bipolar" opposites that lead to low evaluations.

Student ratings have been found to correlate highly with instructor personality traits in several other studies (e.g., Feldman, 1986; Murray, Rushton, & Paunonen, 1990; and Renaud & Murray, 1996). The Dr. Fox experiment of the 1970's (e.g., Marsh, 1987; Naftulin, Ware, & Donnelly, 1973) found that students rated charismatic and expressive instructors as highly effective, regardless of the content of their lectures. The aforementioned studies are extremely relevant to the proposed study as it is the intuition of the researcher that instructor personality traits are correlated with perceptions of teaching excellence.

In research conducted with 351 undergraduate students, Radmacher and Martin (2001) investigated whether factors such as teachers' ages and personalities, students' course grades, gender, enrollment status, academic abilities, and ages were predictors of student evaluations of faculty. A survey form using seven items related to the personality trait of extraversion and eight items reflecting teaching excellence was employed to collect the data in the study. The researchers found that the highest correlates with faculty evaluations were teachers’ extraversion ($r = .79$) and the teacher's ages ($r = - .80$) were the highest correlates with faculty evaluations. Students' gender was found to have the lowest correlation ($r = .08$) with teaching effectiveness. Teacher's extraversion was the only significant predictor of student evaluations ($r = .76$, $p < .001$) after controlling for enrollment status, course grades, and student ages using hierarchical regression analysis. This study is also relevant to the proposed study, as the proposed study will
investigate the correlations of instructor personality traits, students' age, students' gender, and other demographic characteristics with the perception of teaching excellence.

Feldman (1986) found a positive correlation between perceived teaching effectiveness and three clusters of personality traits, which included: (a) energy and enthusiasm, (b) positive regard for others, and (c) a positive self regard. However, Feldman found little support for the hypothesis that teachers' personality characteristics are associated with students' evaluations of teaching effectiveness when self-report measures of teachers' personality characteristics were used. Feldman did find that a significant correlation existed when the predictor variable was the perception of the teacher's personality.

Long and Sparks (1997) attempted to extend earlier works in the assessment of the perceptions of faculty, graduate teaching assistants, and undergraduate students regarding the behaviors of effective teachers. Additionally, this study examined behaviors of professors and students that may facilitate or inhibit the learning process. A sample of 200 undergraduate students, 15 faculty members, and 10 graduate teaching assistants served as participants for this study. Participants were asked to respond to six open-ended questions (e.g., professor's behaviors that heighten interest early on, professor's behaviors that dampen interest early on, and professor’s behaviors that help students perform well over the duration of the course). The results of the study revealed both similarities and differences among the three groups studied. Professors' and Teaching Assistants' answers focused more on instructionally related behaviors when student interests and performance were considered. Students emphasized personal
characteristics when the issue related to interest. The findings suggested that professors who are perceived as being effective use personal behaviors such as enthusiasm to inspire students. These professors use clarity of presentations to aid student performance. The study also found that females value a professor as being approachable. This suggests that women, more than men, feel that professors should be informal and establish a rapport with students. It appears that those professors who attend to student needs are highly regarded by students. The findings of this study were consistent with other research that has been reported (e.g., Gadzella, 1977; Gadzella, Tomcala, Fullwood, Lytton, & Benton, 1992; Mueller, Roach & Malone, 1971).

Williams and Ceci (1997) investigated if it was possible to elevate student evaluations of teaching effectiveness by changing one "content-free" factor (e.g., presentation styles) while holding all content-relevant factors (e.g., content, format, examinations, grading policies) constant. These researchers believed that instructor evaluations fluctuate systematically in accordance with variables that have little to do with the actual content of the instructor's lectures, reading materials, or grading policies. The study utilized the collection of instructor/course evaluation materials from faculty workshops over two different semesters. The participants in this study were 472 Cornell University students. In the final week of their class, participants were asked to rate the course and instructor by responding to 10 questions on a 1-to-5 scale. The findings mirror many of the studies previously mentioned in this review. The students rated instructors more knowledgeable when the instructor was enthusiastic during their presentation. Instructors were rated as more tolerant of students' viewpoints when they used a more enthusiastic presentation style. Students saw enthusiastic instructors as more accessible.
The perception of the instructor's level of organization was strongly influenced by the instructor's presentation style.

Concerning students' evaluations of courses and instructors, Williams and Ceci (1997) found that students rated their level of learning as different with each teaching style. Although testing procedures did not reveal improved learning with an enthusiastic instructor, students felt that they had learned more material when exposed to the enthusiastic instructor. With enthusiastic instructors, students found greater clarity in the course expectations, grading policy, and goals. Although identical grading policies were used in each of the study conditions, students felt that the enthusiastic instructor was fairer in his/her grading system. The study suggested that the overall course rating showed extreme modifiability due to an instructor's teaching presentation style. Finally, investigators found that students' performance in the course influenced their rating of the instructor and the course influenced their ratings of the instructor and the course. This result is similar to that of previous studies that found a positive correlation between grades received and overall course rating (Greenwald, 1995).

Levy and Peters (2001), as discussed previously in Chapter One was the inspiration for the current proposed study. Levy and Peters asked 105 undergraduate psychology students to complete a questionnaire that assessed their perceptions of the best college courses across three domains. The three domains included: the course, the professor, and the student's role. Results of this study were consistent with earlier works such as Caplow, Wedman, and Wedman (1995), Long and Sparks (1997), and Marsh and Ware (1982). Levy and Peters found that the best college courses are ones that have a
"comfortable atmosphere and interesting course content and reviews before the exams" (p.47). Students did not rate their easiest classes as the best courses. Students rated classes low if those courses did not include classroom activities. Additionally, they found that students rated courses higher if they were not forced to participate in the classroom. In relation to the perception of professor characteristics, the best professors were perceived as having a "sense of humor, being excited about the material, being entertaining, having a caring attitude, using a variety of teaching techniques, communicating well, being not arrogant, being fair, being approachable, and making students feel smart" (p.47). It is clear that there is a relationship between students' perceptions of instructor's personalities and how they rated courses. When it came to students' perceptions of characteristics of student roles, the best courses were those in which students received the grade that they reported they deserved. Courses in which students were asked questions in class were rated low. The authors suggested the results of the study serve to provide psychology instructors with insights for evaluating, revising and improving the teaching and courses.

Consistent with earlier work, Levy and Peters found that students viewed the best courses as those with comfortable classroom atmosphere and interesting course content (e.g., Caplow, Wedman, & Wedman, 1995; Long & Sparks, 1997; Marsh & Ware, 1982). The relation between undergraduates' perception of the professor's personality and how they evaluated courses was also shown to be significant (e.g., Marsh, 1984; Marsh & Ware, 1982; Murray, 1983; Weisz, 1989). Also consistent with prior research, professors of the best courses were caring, excited about their course, had a sense of humor and
were entertaining (e.g., Long & Sparks, 1997; Mueller, Roach & Malone, 1971; Waters, Kemp & Pucci, 1988).

Studies conducted at Community Colleges

A thorough review of published and web based literature revealed only a handful of studies of teaching excellence at the community college. Yankowski (1992) distributed a 63-item questionnaire to administrators, award winning faculty, non-award winning faculty, and students at six Hawaii community colleges. The researcher asked participants to rate and rank the most important factors of teaching excellence. Nine factors were determined to be most important. These factors were: (a) enjoys teaching, (b) respects students, (c) makes complex concepts easy to understand, (d) shows enthusiasm in teaching the material, (e) is available to students when they need help, (f) listens to students, (g) answers student questions clearly in ways that promote understanding, (h) enjoys the subject matter they teach, and (i) organizes materials well. Cravens (1996) reported the results of a study conducted at Saint Louis Community College that asked students to generate characteristics associated with teaching excellence. In the first phase of the two-phase study, 497 students were asked to list methods and behaviors that they felt resulted in teaching excellence. After determining the 20 most frequently cited characteristics and behaviors of teaching excellence, a second questionnaire was administered to 423 students to develop a point value score for each characteristic. An analysis of the results from both phases revealed little overall agreement among students regarding the characteristics of teaching excellence. The analysis found several dissimilar items both making the top 20. One pair of dissimilar items included "uses facts and examples not in the text" and "lectures on contents of the
text". Another dissimilar pair included "flexibility" and "adherence to regulations". The second phase of the research revealed that the top five ranked items were: (a) use of relevant examples; (b) clear emphasis on facts; (c) use of visual aids; (d) use of humor; and (e) projects enthusiasm. The bottom five ranked items were: (a) provides extra credit; (b) is flexible with regulations in the syllabus; (c) tests students frequently; (d) adheres to regulations in the syllabus; and (e) lectures on the contents of the text.

Validity Concerns of Student Evaluations for Teaching Excellence

How can we examine the perceptions of teaching excellence in a valid way? The validity of student rating measures of courses and teaching effectiveness quality was severely questioned in the 1970's (Greenwald, 1997). Various research studies conducted during the 1980's, in the form of correlational construct-validity designs, led many to reevaluate their concerns. Authors such as Marsh and Roche (1997) and McKeachie (1997) believed that student ratings are the single most valid source of data on teaching effectiveness and excellence. Greenwald (1997) outlined three types of studies that provided supportive evidence of validity of student ratings and evaluations. The discussion that follows reviews the three types of validity with the third type being most relevant to the current proposed study. First, construct validity studies have utilized multiple sections of the same course that were taught by different instructors. These studies attempted to match student ability across all sections and have employed similar or identical exams. Using examination performance as a measure of achievement, these studies examined whether differences in achievement for students taught by different instructors were reflected in the students' evaluations of the instructors. Although meta-analysis reviews have not agreed on all points concerning the validity of student ratings,
multisection validity studies have provided evidence for at least moderate convergent validity of ratings. Correlations between ratings and exam-measured achievement average about .40 (Abrami, Cohen, & d'Apolonia, 1998). Multisectional validity studies have favored "construct validity of ratings by supporting an interpretation of observed correlations between grades and ratings in terms of parallel effects of a third variable, teaching effectiveness, on both variables" (Greenwald, 1997 p.1184).

The second type of study investigating the construct validity of student ratings has been path-analytic studies. These studies explore the idea that the effects of a third variable on both grades and ratings can explain their correlation but have considered third variables other than teaching effectiveness. Howard and Maxwell (1980) utilized path-analytic techniques to show that both grades and ratings were related to levels of student motivation for courses. The results of this study suggest that construct validity is seen with student ratings.

The third type (multitrait-multimethod studies) of construct-validity studies have attempted to demonstrate that student ratings possess both convergent and discriminant validity. This type of validity is most relevant to the current proposed study. These studies seek to demonstrate that ratings correlate relatively well with measures based on other methods for assessing the construct of quality of instruction. Ratings correlate less well with measures assumed to assess other constructs (e.g., Freedman, Stumpf, & Aguanno, 1979; Marsh, 1982). These multitrait-multimethod studies have reported evidence for both convergent and discriminant validity of student ratings.

Teaching effectiveness and excellence in general are difficult to validate since no universal criterion of teaching effectiveness has been established. Therefore, construct
validation has illustrated that student ratings have been related to other measures that are assumed to indicate teaching effectiveness. If evidence suggests that scores on two instruments measure the same thing, then scores on both instruments are said to be valid. Evidence for long-term stability of student ratings/evaluations can be interpreted as a validity measure. Marsh and Overall (1980) and Marsh, Fleiner, and Thomas (1979) reported the results of two studies that support the assertion of the validity of student ratings.

Greenwald (1997) stated over a 25-year period, “more publications favored validity than invalidity” (p. 1182). The author further suggested that while many validity studies support the validity of student evaluations, there continues to be various controversial points associated with the use and interpretation of data gathered by assessment instruments.

Cashin (1995) stated that for student ratings, validity means, "to what extent do students rating items measure some aspect of teaching effectiveness?" The problem comes in the definition of effectiveness. There is no consensus upon a definition of effectiveness. One approach to deriving a measure of validity is to look at student learning as an indicator of effectiveness. Cashin believed the student learning may in fact be the best way to measure effectiveness. A number of studies have attempted to study the hypothesis that students of more effective instructors should learn more. Most of these studies have involved comparing multiple-section courses. Cohen (1981) and Feldman (1989) reviewed a number of studies in which multiple instructors teach different sections of the same course, using the same syllabus and textbook, and using the same external exam. Using students' grades on an external exam as a measure of student
learning, Cohen and Feldman examined correlations between the score on the exam and various student-rating items. The average correlations are given below (1981 - Cohen; 1989 - Feldman):

<table>
<thead>
<tr>
<th>Student ratings of</th>
<th>1981</th>
<th>1989</th>
</tr>
</thead>
<tbody>
<tr>
<td>achievement of learning</td>
<td>.47</td>
<td>.46</td>
</tr>
<tr>
<td>overall course</td>
<td>.47</td>
<td>--</td>
</tr>
<tr>
<td>overall instructor</td>
<td>.44</td>
<td>--</td>
</tr>
<tr>
<td>teacher skill dimension</td>
<td>.50</td>
<td>--</td>
</tr>
<tr>
<td>-course preparation</td>
<td>--</td>
<td>.57</td>
</tr>
<tr>
<td>-clarity of objectives</td>
<td>--</td>
<td>.35</td>
</tr>
<tr>
<td>teacher structure dimension</td>
<td>.47</td>
<td>--</td>
</tr>
<tr>
<td>-understandableness</td>
<td>--</td>
<td>.56</td>
</tr>
<tr>
<td>-knowledge of subject</td>
<td>--</td>
<td>.34</td>
</tr>
<tr>
<td>teacher rapport dimension</td>
<td>.31</td>
<td>--</td>
</tr>
<tr>
<td>-availability</td>
<td>--</td>
<td>.36</td>
</tr>
<tr>
<td>-respect for students</td>
<td>--</td>
<td>.23</td>
</tr>
<tr>
<td>teacher interaction dimension</td>
<td>.22</td>
<td>--</td>
</tr>
<tr>
<td>-encouraging discussion</td>
<td>--</td>
<td>.36</td>
</tr>
</tbody>
</table>

Cohen suggested that student rating validity correlations between .00 and .29 even when statistically significant are not practically useful. Correlations between .30 and .49 are practically useful. Correlations between .50 and .70 are very useful, but are not common in the study of complex factors. Based on this general rule, Cashin suggested that the aforementioned relationships tend to support the validity of student ratings. The author believed this to be true because "the classes in which the students gave the instructor higher ratings tended to be the classes where the students learn more" (p. 3). The correlations are far from being perfect, because many of the variables that relate to students' learning will be related to student characteristics (motivation or ability) rather than instructor characteristics. The correlations reported by Cashin are extremely
relevant to the proposed study as many of the items addressed are similar to the dimensions employed in the modified version of the SEEQ used in the proposed study.

One of the concerns related to validity has been the possibility of biases in student ratings—about variables that correlate with student ratings/evaluations. Marsh (1984) suggested that bias in student ratings/evaluations should be restricted to variables not related to teaching effectiveness. Accordingly, Cashin (1995) suggested correlations between student ratings and class size, or the students' interest in the course are not biased because it is possible that students in small classes, or classes of students who are interested in the subject (mediating variable) may actually learn more. Cashin stated that despite the widespread concern, research has shown few variables that correlate with student ratings/evaluations. A number of variables have been shown to have little to no relationship to student ratings and therefore do not require control. These instructor variables included:

1) Age and teaching experience - Marsh and Hocevar (1991) found that, in general, age and years of teaching experience did not seem to be correlated with student ratings. Feldman (1983) did find small differences that tend to be negative, such as older teachers tend to get lower ratings.

2) Gender of the instructor - Feldman (1992) found that in a review of 14 studies there were no differences in global ratings in the majority of studies, but in a few studies male teachers received high ratings. In a review of 28 studies, Feldman found that ratings tended to favor female instructors slightly.

3) Race - Centra (1993) stated that there has been a lack of studies investigating
the relationship between student ratings and race. Centra has speculated that students of the same race as the instructor may rate that instructor higher. While few studies have looked at race difference, Li (1993) found no difference in ratings of Asian students compared to American students of their instructors.

4) Personality - Very few faculty personality traits have been shown to correlate with student ratings (Braskamp & Ory, 1994). The only traits that seem to make a difference are positive self-esteem (r= .30) and energy and enthusiasm (r= .27). Cashin (1995) suggested that these traits enhance the instructor's teaching effectiveness and therefore should not be controlled.

Numerous studies have investigated student variables and their relationship to student ratings/evaluations. These studies have shown that student variables are not related to student evaluations. These variables include: age of student (Centra, 1993); gender of the student (Feldman, 1997); level of the student (McKeachie, 1979); students' GPA (Feldman, 1976); and student’s personality (Abrami, Perry, & Leventhal, 1982). A correlation between two student variables and student ratings was established. Marsh and Dunkin (1992) found that instructors are more likely to receive higher ratings in classes where students had a prior interest in the subject. Marsh and Dunkin also determined that there was a positive, but low correlation between expected grades in a course and the students' rating of that course. These studies are relevant to the current proposed studies because the study will look at student variables (such as student age, ethnic background, and gender) as possible factors that might influence students' perceptions of teaching excellence. Several course variables are related to student ratings. These variables include: (a) level of the course (Braskamp & Ory, 1994); (b) the students' academic field.
of study (Feldman, 1978); and (c) workload/difficulty (Marsh & Dunkin, 1992). Course variables that do not appear related to student ratings include class size (Feldman, 1984) and time of day of the class (Aleamoni, 1981).

While many variables are not highly correlated with student ratings/evaluations, there are some variables that are correlated with student ratings and therefore may require control. Naftulin, Ware, and Donnelly (1973) suggested that student evaluations might be more influenced by the instructor's lecture style (expressiveness) of presentation than by the substance of the content. Other researchers, including Marsh and Ware (1982), suggested that expressiveness tends to enhance learning and does not require control.

Reliability Concerns with Student Ratings for Teaching Effectiveness

Cashin (1995) stated generally, student ratings/evaluations tend to be statistically reliable, valid, and relatively free from bias or need for control. In relation to student evaluation items, reliability refers to consistency or interrater agreement (i.e., within a single class, do students tend to give similar responses on a given item). For example, within a given class, the students might give similar ratings on given items. Reliability varies with the number of raters. Reliability increases with an increase in the amount of raters. Sixbury and Cashin (1995) found the following median reliabilities for a 38 item rating form:

- for 10 raters, .69
- for 15 raters, .83
- for 20 raters, .83
- for 30 raters, .88
- for 40 raters, .91

Increasing the number of raters was related to increased reliability. With other well-designed evaluation forms, Cashin (1995) has found similar high reliabilities.
Marsh and Roche (1997) stated that given a sufficient number of students in a class, the reliability of class-average student evaluations/ratings compare favorably with that of the best objective tests. The reliability of given items depends more on the number of individuals responding rather than the content of those particular items. According to Marsh (1982), "the average reliability of SEEQ items is about 0.90 when based on 25 students, but falls to 0.74 when based on 10 responses and is even lower for fewer responses" (p. 81). In more recent research, Marsh (1987) reported that the reliability for SEEQ factors is about 0.95 for the average response for 50 students, 0.90 from 25 students, 0.74 from 10 students, 0.60 from five students, and only 0.23 for one student. Another way of determining the reliability of a measure is through the use of coefficient alpha, which indicates the relative consistency among different items designed to measure the same factor. The coefficient alphas for the different evaluation factors in the SEEQ vary between .88 and .97 (Marsh, 1982). This result is especially important due to its relevance to the current proposed study. The proposed study utilizes a modified version of the SEEQ with different items designed to measure the same factor.

Stability is concerned with agreement between raters over time. Centra (1993) and Braskamp and Ory (1994) found that ratings/evaluations of the same instructor tend to be similar over time. Generalizability is concerned with how confident we can be that findings accurately reflect the instructor's general teaching effectiveness. Marsh (1982) studied data from 1,364 courses and divided them into four categories: the same instructor teaching the same course but in different terms, the same instructor teaching a different course, different instructors teaching the same course, and different instructors teaching different courses. He correlated the student ratings in the four different
categories, separating items related to the instructor (e.g., enthusiasm, discussion, organization) from background (e.g., student’s reason for taking the course, workload). Marsh found that the instructor-related correlations were higher for the same instructor, even when teaching a different course. The correlations for the background items were related more to the course than to the instructor. There correlations were higher for the same course. In summary, Marsh concluded that it is the instructor and not the course that is the primary determinant of the student evaluation items.

Reliability of survey forms measuring students' perceptions of teaching excellence can be revealed through test-retest assessments. This will be extremely important for the current proposed study as it employs a modified version of Marsh's SEEQ. In a longitudinal study (Marsh & Overall, 1980) using the original SEEQ form, ratings in 100 classes correlated .83 with ratings by the same students when the researchers again evaluated the same classes retrospectively several years later. In the proposed study, a pilot study will be conducted to assess the test-retest reliability of the modified version of the SEEQ used in this study.

After reviewing the literature related to validity and reliability of student evaluations of teaching effectiveness and excellence, several conclusions can be made. In general, student evaluation forms tend to be statistically reliable, valid, and they seem to be relatively free from bias or need for control. Cashin (1995) proposed that student evaluations probably have less bias and need less control than other procedures that might be used to collect data on instructors. McKeachie (1997) suggested that student ratings are the single most valid source of data on teaching effectiveness and excellence. Roche (1997) stated that there is little evidence of the validity of any other sources of
effectiveness data, other than student evaluations. There continues to be doubters when it comes to the validity of these rating methods. Williams and Ceci (1997) suggested that student evaluations tend to be related to instructor style changes and that this seriously challenges the widespread assumption about the validity of student ratings. These researchers call for additional research to be conducted to further investigate the validity and reliability of student ratings.

Prior Factor Analyses of the SEEQ

Since the current study utilized confirmatory factor analysis (CFA) in the data analysis for research questions two and three, a brief discussion of prior studies using factor analysis to assess the SEEQ is presented here. The original 35-item version of the SEEQ (Marsh, 1987) was designed to measure nine evaluation factors, that have been supported by more than 30 exploratory factor analyses (e.g., Marsh, 1983, 1984, 1987; Marsh & Hocevar, 1991). These analyses have demonstrated the generalizability of the SEEQ factor structure across different levels of instruction and across different disciplines. It is important to note that these analyses were conducted at universities and not at the community college level.

Empirical support for the multidimensionality of students' evaluations of teaching effectiveness on the SEEQ has been demonstrated through an investigation of the factor structure of this instrument (Marsh, 1991). Marsh (1991) selected two random samples of 500 classes from the Division of Social Sciences at a large U.S. university. Students using the SEEQ evaluated academic staff in these classes. Two 35 x 35 covariance matrices were derived from the two samples and further analyzed. All analyses were conducted using LISREL V (Joreskog & Sorbom, 1988). Marsh applied a Hierarchical
Confirmatory Factor Analysis (HCFA) to the sample data that were collected. According to Marsh (1991), when applying the HCFA it is important to evaluate the following:

a) the rationale for the higher-order models and their relation to the empirical results, b) support for the first-order model on which the HCFA model is based, c) the ability of higher-order factors to explain relations among first-order factors, and d) the amount of variance in first-order factors that is explained by second-order factors (Marsh, 1991).

In the Marsh (1991) study, design of the SEEQ instrument was the basis of the first-order model and higher-order factor models were derived from prior research. A total of four models positing one, two, three, or four factors were compared in this study. Using a LISREL CFA analysis of nine SEEQ dimensions, revealed a Chi-square test of model fit with a value of 4828.22 (df = 524), TLI = .847 (Tucker-Lewis index), and a RNI (relative noncentrality index)= .865. These results suggested that a priori model was not fully adequate. Marsh found that none of four models could adequately fit the data in either the calibration or cross-validation studies. Because each of these models was inadequate, they were not considered further. To improve fit, factor loading and correlated uniqueness were added to the model (see Marsh, 1991 for an in depth discussion of these procedures). A final model was developed and tested using confirmatory factor analysis. The results of the analysis implied that a nine-factor a priori model that was consistent with the design of the SEEQ instrument fit the data set better than the other models tested.

Marsh and Hocevar (1991) conducted a factor analysis of students’ evaluations of teaching effectiveness with a total group of 24,158 courses and for each of 21 different
subgroups derived from the total group. The subgroups were constructed to differ in terms of academic discipline, course level (undergraduate or graduate), and instructor level (teaching assistant to regular instructor). The nine factors of the SEEQ instrument were consistently identified in each of the 22 different factor analyses. The results provided strong support for the generality of the factor structure underlying students’ evaluations of teaching effectiveness.

As can be seen from previous research, the SEEQ has been analyzed in terms of factor structure and a clear factor structure has been documented. The intent of this research question was to analyze whether community college students’ perceptions of teaching excellence fit a factor structure model similar to the one found by Marsh or whether differences exist between these groups. Analysis of the hypothesized model included the assessment of goodness of fit for each of the data sets obtained from community college students.

Who are Today's Students?

*Community College Students versus University Students*

Approximately 45% of today's 14 million higher education students are enrolled in a community college or other 2-year college (Sanders & Bauer, 1998). Between the years 1978 and 1991, enrollment at U.S. community colleges rose by 31% compared to 23% at 4-year institutions (Greenberg, 1999). Since the 1990's both universities and community colleges have seen the average student age rise, but the proportional growth of non-traditional students has been significantly higher in the community colleges (American Association of Community Colleges, 2002). According to Saunders and Bauer (1998), universities tend to have a uniform student body that share similar goals and
objectives. Rather than one uniform student body, community colleges have many subgroups within their student bodies. Community colleges tend to be dependent upon commuter students, while most universities have student bodies made up of resident students and commuters (Saunders & Bauer, 1998). Length of time on campus differs greatly, as do the programs offered by the two different institutions. Community Colleges tend to have few students who engage in campus life activities that keep them on campus beyond that of class and study time. Universities, with their fraternity and sorority activities, many clubs and organizations, maintain campus activities that keep students on-campus and involved in campus life. Sanders and Bauer (1998) report that the community college students include:

A sixteen-year-old who is bored with high school and is simultaneously taking the last two years of high school and the first year of college. She will transfer and complete a four-year degree. While some universities allow dual-enrollment students, that vast majority of these students attend the community colleges.

A nineteen-year-old completing the second year of a two-year transfer program while living at home to save money.

A twenty-two-year-old enrolled in a culinary arts program, training to become a professional chef. While some universities offer specialized vocational training programs, the community colleges have taken on this responsibility in many states.

An unemployed worker in his mid-twenties enrolled in basic reading to develop literacy skills to qualify for a new job. While 81% of universities offer basic literacy skills training, 100% of community colleges offer literacy skills training (Hansen, 1998).

A local student who flunked English at the local university and is working to bring up her GPA to re-enter the university.

A thirty year old man taking conversational Spanish at night for a trip to Mexico. While universities offer foreign language classes, they are generally designed for degree seeking students. The community colleges offer many non-
credit courses that provide useful knowledge and skills that universities do not provide.

A recent immigrant from Russia currently enrolled in English as a Second Language and citizenship courses. While some universities offer ESL courses and citizenship course, the community colleges have been delegated this responsibility in many states. ESL enrollment increased nearly 50% over the last decade (Greenburg, 1999).

A mid-career personnel manager brushing up on a computer software program at night. While some universities offer non-degree and CEU computer classes, the community colleges offer these classes at convenient times for working adults.

The customer service group from a national known insurance company attending a workshop together on conflict resolution and quality improvement.

The mother of four-year-old twins, who is attending a parenting skills class while the twins are attending a preschool class. While some universities offer parenting skills programs, the community colleges have been delegated this responsibility in many states.

Universities and community colleges differ greatly when comparing students' ages and gender. Nationwide the average age of a post-secondary education student is twenty-one, but the average age for a community college student is twenty nine (American Association of Community College, 2002). This average age is due to the fact the community college students range in age from young teenagers to senior citizens.

Females represent 58% of all community college students, which is slightly higher than the 55% of the student body at universities and other 4-year institutions (American Association of Community Colleges, 2002). Dual enrollment students, while presently only comprising a small percentage of the community college population, are steadily increasing in numbers on the community college campus. Andrews (2000) reported that dual enrollment high school students accounted for approximately 3.6% (123,039 students) of the community college student body in 1995. Many researchers project the
numbers of dual enrollment students will significantly increase during the first decade of the 21st century. This will be due partly to the fact that state lawmakers will seriously consider funding dual enrollment programs to encourage faster progression through college, but also to ease overcrowding in the nations schools.

Ethnic diversity differences can be observed between the community colleges and 4-year institutions. Since community colleges traditionally draw students from a local community, they are made up of the ethnic diversity of the community. Students in the community college range from recent arrivals to the United States to long time residents. Community colleges' open door policies are attractive to those new to the United States and to ethnic minorities in general. Minority students made up 31.8% of the total population of community college students in 1997. That number has increased significantly since 1976, when the composition of minority students at community colleges was 19.8% (Foote, 1997). Community colleges enroll approximately 45% of African Americans enrolled in higher education, 52% of all Hispanic students, and 56% of Native Americans enrolled in college (American Association of Community Colleges, 2002).

Community college students, like their traditional 4-year institution counterparts, are likely to be employed. The most current national data suggest that as many as 70% of community college students are employed either full or part-time while enrolled in classes (American Association of Community Colleges, 2002). Those students who are employed on a full-time basis are greater at the community college level than at the 4-year institution level (Saunders & Bauer, 1998). Part-time enrollment reached a high of 64% of the total community college enrollment in 1997 (Bryant, 2001). Community
colleges offer a better atmosphere for those students with jobs and family to enroll on a part-time basis. According to Bryant (2001), students age 35 and older make up a larger percentage of part-time students than full-time students.

Community colleges are extremely attractive to returning students, especially those with children. Numerous community colleges offer affordable daycare that makes it possible for these students to enroll in classes. Many students with children, because of related time constraints, do not involve themselves in co-curricular activities at the college. Community college students in general, because of their busy lives, do not have the time to involve themselves in co-curricular activities on campus. Many more students at the university level are involved in co-curricular activities because of the different lifestyles that they lead.

Community college students often have different personal, career, and life goals from that of the typical 4-year college or university student. Because community college students have such a broad range of goals, the institutions tend to offer a wide range of programs. Many students enroll in community colleges to improve or upgrade their job skills and to improve their economic outlooks (Saunders & Bauer, 1998). Remedial courses, adult basic education, ESL courses are featured in the community college setting and draw students who might not be enrolled in higher education elsewhere.

Finally, based on the 15 years experience teaching at the community college, it is the author's intuition that students may attend the community college for different reasons than those students who chose to attend a university. Whether students are beginning their college career with thoughts of transferring to a university, upgrading their skills, or attending a course to learn a new hobby, students attend the community college for their
own purposes. Students are drawn to the community college because of smaller class sizes, personalized attention, and a student/learning centered environment which large major universities can no longer provide. Cohen and Brawer (1996) speculate that students attend 2-year institutions because community colleges are instantly responsive, they tend not to have punitive grading, and they have forgiveness for past educational failings. It is the author's speculation that community college students' motivation, expectations, and perceptions differ from that of their university counterparts. If this is indeed true, then higher education research needs to address the community college students separately rather than assuming that they are no different than university students. The premise behind the present study is that community college students differ in their perceptions of education from those students who choose to attend universities.

Conclusions

The current study was designed to investigate community college students' perceptions of teaching excellence. Earlier in this chapter, the concept and the definition of teaching excellence were discussed. Additionally, empirical research studies designed to assess students' evaluations of teaching effectiveness and excellence were described. In these discussions, two important issues come to light. First, the body of available literature describes hundreds of studies (e.g., Marsh, 1982; Hudak & Anderson, 1984; Feldman, 1986) that have investigated student evaluations and student ratings of particular instructors and courses. Only a limited amount of studies have attempted to truly explore students' perceptions of teaching excellence (e.g., Eison & Stephens, 1988; Carson, 1996; Levy & Peters, 2002). Obviously, there is a need for further research related to how students' perceptions influence their views of teaching excellence. Second,
very few of the studies previously discussed utilized community college students in their sample. It was the author's speculation that researchers view community college students and university students as so similar that they do not include community college students in their samples. It may also be a matter of the use of a convenience sample, since university-based researchers have conducted most studies. Since the argument has been made that community college students differ from their university counterparts, does it not make sense to assess what community college students’ perceived as attributes essential to teaching excellence? There is a need for research to investigate the perceptions of teaching excellence among community college students. It was the intent of the current research effort to address the two aforementioned issues. The current study investigated community college students' perceptions of teaching excellence. Chapter Three will describe the methodology that was employed to address these two important issues.
CHAPTER THREE

METHOD

The purposes of this quantitative study are to (a) examine community college students’ perceptions of teaching excellence; (b) examine the underlying factor structure of the perceptions of teaching excellence held by community college students to determine goodness of fit against a factor structure model similar to a model previously established with university students using the SEEQ (Marsh, 1991); (c) examine the underlying factor structure of the perceptions of teaching excellence for community college students with the addition of four dimensions not included in the original SEEQ; and (d) examine whether community college students' demographic characteristics relate to perceptions of teaching excellence. While a thorough examination of a large published literature reveals multiple studies examining teaching excellence, the vast majority of these studies were conducted at the university level. It seems that either researchers have used university students as a matter of convenience or they believe that undergraduate students (whether attending community colleges or universities) have similar views and beliefs when it comes to teaching excellence. I hypothesized that students at different institutional types differ in their perceptions of teaching excellence. This study empirically examined community college students’ perceptions of teaching excellence. It is also important to note that this research study was not a study of students’ evaluations of their specific professors, but rather sought to examine what community college students’ truly believe is most central to teaching excellence.
Research Questions

Specifically, this study explored the following questions:

1. Based on community college students' perceptions, what instructor qualities or course attributes, as deemed by Marsh's SEEQ (1982) and the additional items that have been added to this survey, are most central to teaching excellence?

2. Does the underlying factor model of the perception of teaching excellence held by community college students fit the factor structure model (consisting of eight dimensions) previously established with university students using the SEEQ (Marsh, 1991)?

3. Does the factor model consisting of 12 dimensions (including the four dimensions of Diversity, Ethics, Active Learning, and Technology not included in the original SEEQ) fit the data from community college students?

4. Do community college students' demographic characteristics (i.e., gender, age, number of credit hours attempted, full or part-time student, reasons for attending the community college, employment status, and ethnic background) relate to perceptions of teaching excellence?

Pilot Study

*Focus Groups and a Panel of Outside Experts*

Prior to testing of the instrument and methods used in the current study, it was helpful to examine the instrumentation employed. This was important because of the inclusion of four new dimensions (diversity, ethics/integrity, technology, and active learning) not originally included in Marsh’s SEEQ (1976). Since the SEEQ was originally developed, instructor and student use of technology have become increasingly
important in the delivery of instruction. Additionally, promotion of a greater appreciation of diversity issues as well as concerns about ethics and integrity throughout course curricula and faculty use of instructional approaches that promote active student learning have all been heavily emphasized in contemporary higher education literature. Because new items were therefore added to the SEEQ for this study of teaching excellence, it was important to validate the inclusion of these items. As will be mentioned in the section on instrumentation, the items included in the four new dimensions were developed after a review of a number of student surveys currently used by major institutions in the United States (e.g., Assessing the Classroom Environment used by the University of Iowa; the Instruction and Course Evaluation System used by the University of Illinois, Urbana-Champaign; the IDEA evaluation system used by Kansas State University). Rationale for the inclusion of these items came from a review of multiple studies over the past two decades that have emphasized the importance of diversity, technology, and ethics in quality education as discussed previously in Chapter Two.

Although these new items are similar to items on the aforementioned evaluations, it was important to validate their use in the current study. Two focus groups and one panel of outside experts were asked to critically examine these items and offer suggestions about possible changes. Immediately upon receiving the approval to conduct the study from the doctoral committee, the University of South Florida Institutional Review Board, and official approval of the community college utilized in this study, the focus groups commenced. Additionally, contact with the expert panel occurred as soon as final approval was received.

Focus Group One was comprised of five community college faculty members at
the community college utilized for this study. The group consisted of two male (both Caucasian) and three female (one African American and two Caucasian) faculty members with an average of nine years of full-time teaching experience. These faculty members met once for approximately two hours to review and discuss the items to be used in the proposed survey instrument. See Appendix G for the Faculty Focus Group format. The focus group was asked to: (a) address the clarity of the new survey items; (b) assess the importance of the items; and (c) generate any alternative items if appropriate. A summary of the information generated by the Faculty Focus Group is presented in Appendix H.

Focus Group Two was composed of nine community college students. The group consisted of four male (three Caucasian and one Hispanic) and five female (one African American, one Hispanic, and three Caucasian) students. The focus group was asked to: (a) address the clarity of the new survey items; (b) rate the importance of the items; and (c) generate any alternative items if appropriate. See Appendix I for the format of the Student Focus Group. A summary of the information generated by the Student Focus Group is presented in Appendix J.

Additionally, a panel of outside five experts comprised of university and community college educators who had experience with the development of student assessment instruments was formed. Members of this focus group were individuals who had been recommended by members of the dissertation committee. This panel was contacted via email and asked to: (a) address the clarity of the new survey items; (b) rate the importance of the items; and (c) generate any alternative items if appropriate. A summary of the information generated by the panel of outside experts is presented in Appendix K.
Data collected from the two focus groups and the expert panel were compiled and reviewed. The following modifications of the proposed survey were made after comments from the panel of experts and focus groups were received:

1) Item 30 was changed to read "The instructor uses appropriate technology in the classroom."

2) A survey booklet was employed rather than a scan form.

3) Item 46 was changed to allow students to write in their age.

4) Item 50 responses were modified to read:

   (A) To earn an AA degree, with no plans to continue on to a four-year institution;
   (B) To earn an AA degree, with plans to continue on to a four-year institution;
   (C) To earn an AS degree;
   (D) For personal interest;
   (E) To complete a certificate program;
   (F) Seeking an employment upgrade/retooling; and
   (G) A university student taken one or more community college classes.

5) The survey was modified from 52 items to 51 items. This was accomplished by merging proposed items 51 and 52 into one item.

Modifications to the current research were made and filed with the appropriate department and the Institutional Review Board.

_Pilot Study of the Methods and Instrumentation_

A pilot study for the current research was conducted to evaluate the reliability of the scores derived from the survey instrument and examine methodological issues
important to a large-scale study. The pilot study was completed at a central Florida community college with an enrollment of approximately 18,000 students. The pilot study was conducted at one of the school’s campuses during weeks three through five of the fall semester of the 2004-2005 school year. Two other campuses of the college were used for the collection of data in the main study. Permission of the participating community college administration and Human Subjects Review Board was acquired prior to data collection. The survey instruments were given to 118 students in three Introduction to Psychology courses at the participating school. The pilot study included 72 (61%) males and 46 (39%) female community college students. The ethnic make up of the sample included: 90 (76.3%) Caucasian students, 9 (7.6%) African American students, 9 (7.6%) Hispanic students, 2 (1.7%) Native American students, and 8 (6.8%) students who classified themselves as “Other”. The participants ranged in age from 18 to 49, with a mean age of 20.04.

Identifiers (last five digits of student ID numbers) were collected to allow test-retest reliability to be measured. Students were asked to retake the survey again after a two-week period to assess the test-retest reliability of the scores from the survey instrument. A further purpose of the pilot study was to evaluate students' ability to understand the directions of the survey instruments, measure student compliance with the task, and to test the data collection procedures. This allowed potential methodological problems or issues to surface and be corrected prior to the main study.

Primary Study

Participants and Procedures

One thousand forty-seven students enrolled in 30 sections of Introduction to
Psychology and other general education courses (e.g., Humanities, English Composition, Sociology, College Algebra) participated in the current study during the fall 2004 semester. The community college where data was collected is located in the central region of the State of Florida. Cluster sampling was utilized because students selected for participation in this study comprised naturally occurring groups (i.e., individual sections of the Introduction to Psychology and other general education courses). The classes selected excluded web-based courses. The typical class size ranged from 25 to 60 students. The sample for the main study consisted of 1047 community college students enrolled at one community college in central Florida. The sample consisted of 698 (66%) females and 349 (34%) males. Participants ranged in age from 17 to 77 with a mean of 22.57 and a standard deviation of 7.52. A complete breakdown of participants’ demographic data can be found in Table 1.

Instrumentation

After an exhaustive search of published and web-based literature, I concluded that the most helpful and widely used instrument to assess students’ perceptions of teaching excellence would be a modified version of the SEEQ (Student Evaluation of Educational Quality) developed by Herbert Marsh in 1976. The SEEQ is primarily used to evaluate a specific course and/or instructor. However, I believed that a modified version of the SEEQ could also be used to examine students’ perceptions of courses and instructors in general. This instrument was chosen because (a) its items are truly focused on elements of teaching excellence and (b) its psychometric properties (i.e., validity and reliability) have been well-established (e.g., Marsh, 1982b; Marsh, 1984). The current research employed a questionnaire of 51 items (6 demographic items, 29 original items drawn
from the SEEQ and an additional 16 items related to diversity, ethics/integrity, technology, and active learning). The questionnaire appears in Appendix C. The original SEEQ was designed to be (a) easily administered, (b) extremely self-explanatory and (c) machine scorable. The SEEQ measures the following nine dimensions: (a) learning, (b) enthusiasm, (c) organization, (d) individual rapport, (e) group interaction, (f) breadth, (g) assignments, (h) examinations, and (i) difficulty/workload. The modified version of the survey used in this investigation dropped the difficulty/workload dimension of the original SEEQ as these items related specifically to a course in which students are currently enrolled (i.e., this dimension did not lend itself to addressing teaching excellence in a general way). Permission to use the modified version of the SEEQ was received from Herbert Marsh.

Marsh and Overall (1979) conducted a factor analysis of student ratings and confirmed the nine factors the SEEQ was designed to measure. These findings have since been replicated numerous times in multiple discipline areas (Marsh, 1981; Marsh & Cooper, 1981; Marsh, Overall, & Kesler, 1979). These results, as well as other analyses, illustrate the stability and replicability of Marsh's nine dimensions and suggest that these dimensions can be generalized across different student populations.

The questionnaire employed in the study was modified from the original SEEQ in four ways. First, the individual items were modified to reflect the fact that students in the current study were asked to rate instructors and course characteristics in general terms rather than to evaluate a specific instructor. Second, the Likert rating scale was modified from Marsh's ratings of (1) Very Poor, (2) Poor, (3) Moderate, (4) Good, and (5) Very Good to a 5-point scale ranging from (1) of no importance, (2) of little importance,
(3) of moderate importance, (4) of great importance, and (5) of extreme importance to evaluate the extent to which each item contributes to teaching excellence. Third, the SEEQ’s difficulty/workload dimension was dropped from the instrument as it was tied specifically to the course in which the student is currently enrolled. Because of the nature of this study, this dimension did not lend itself to addressing teaching excellence in a general way. Fourth, the modified instrument contained 16 items not found on the SEEQ that covered the areas of technology, diversity, ethics, and active learning. These dimensions and their associated items were not originally included in the SEEQ in 1976.

The instrument employed in this study differed significantly from the faculty/course evaluation form that students from the community college in this study customarily are asked to complete each semester. The Faculty Evaluation Form used by the community college in the study is displayed in Appendix F. While this Faculty Evaluation Form addresses several areas that have been shown to be related to teaching excellence, the form is rather limited in scope and is designed primarily as a faculty evaluation exclusively.

The first section of the current survey instrument (divided into 12 dimensions) was comprised of the modified 29 SEEQ items and 16 items related to technology, diversity, ethics/integrity, and active learning. The second questionnaire section was comprised of six demographic items (i.e., age, gender, ethnicity, number of community college credit hours completed, reasons for attending the community college, and employment status). These items were used to establish whether demographic factors have any relationship to students' perceptions of teaching excellence. The questionnaire was presented in a test booklet format (See Appendix D), while the Informed Consent
Form appeared on a separate page (See Appendix E). The informed consent form was completed first by the student and then submitted to the researcher. Respondents then completed the survey instrument. Students recorded their responses directly on the instrument booklet and submitted it to the researcher upon completion. The informed consent forms and the instrument booklet were placed in separate envelopes to help assure participant anonymity.

Reliability and Validity of the Scores from the Modified SEEQ

Prior to the discussion of reliability and validity of the scores from the SEEQ, it is important to note that the original instrument was designed as a faculty evaluation instrument. The version of the instrument employed in this study evaluated perceptions of teaching excellence and did not evaluate individual instructors. It is the researcher’s belief that the items drawn from the original SEEQ assesses attributes of teaching excellence. In an examination of the SEEQ dimensions and the corresponding items, it is clear that these items assess areas that previous research has suggested to be components of teaching excellence (e.g., Cravens, 1996; Eison & Stephens, 1988; Sherman, Armisted, Fowler, Barksdale, & Reif, 1987; Yankowski, 1992). Although the SEEQ was originally developed as a faculty evaluation instrument, it can be employed to assess perceptions of teaching excellence as its items address attributes related to teaching excellence.

Reliability refers to the relative lack of random error in student ratings and is a mandatory component of any measurement device (Marsh, 1982b). Reliability must be assessed to determine the consistency or stability of the measure. The reliability of student surveys is commonly determined from the results of item analyses (i.e., calculating the correlations among responses to different items designed to measure the
same factor of teaching excellence), from studies of interrater agreement, and from test-retest reliability. Marsh (1984) expressed concern about the use of internal consistency, due to the fact that internal consistency among items is consistently high. It provides inflated estimates of reliability because it ignores a significant portion of error due to the lack of agreement among different students. In most cases, Marsh recommends that researchers use the reliability of the class average response, based on agreement among all the different students within each class. Marsh (1982) stated "according to one conceptualization of reliability called the intraclass correlation, a reliable item is one in which there is agreement among ratings within each class, but consistent differences between the ratings of different classes" (p.81). According to Marsh, the reliability of given items depends more on the numbers of subjects responding rather than the content of those particular items. Further, Marsh (1982) stated, "the average reliability of SEEQ items is about .90 when based on 25 students, but falls to .74 when based on 10 responses and is even lower for fewer responses" (p. 81). Another way of determining the reliability of a measure is through the use of coefficient alpha, which considers the relative correlation among different items designed to measure the same factor. The coefficient alphas for the different evaluation factors in the SEEQ vary between .88 and .97 (Marsh, 1982).

Test-retest reliability was assessed for the current study during the pilot study phase. The paired samples correlations for the 12 dimensions were: (1) Learn, r = .63; (2) Enthusiasm, r = .68; (3) Clarity, r = .78; (4) Rapport, r = .81; (5) Group, r = .77; (6) Breadth, r = .78; (7) Assignment, r = .65; (8) Exam, r = .75; (9) Technology, r = .83;
(10) Diversity, \( r = .82 \); (11) Ethics, \( r = .79 \); and (12) Active Learning, \( r = .78 \). The test-retest correlations were judged to be sufficient to continue on to the main study.

Internal consistency is a measure of the degree of relatedness found among items (utilizing standard measures). For the current research study, the internal consistency was initially assessed through statistical analysis of pilot study data by the developer of this modified SEEQ instrument. It was recalculated in the main study as well. For the pilot study, the internal consistency for the eight SEEQ dimension sections were:

(a) Learning, Cronbach's alpha = .63; (b) Enthusiasm, Cronbach's alpha = .69;
(c) Organization, Cronbach's alpha = .78; (d) Individual Rapport, Cronbach's alpha = .81; (e) Group interaction, Cronbach's alpha = .77; (f) Breadth, Cronbach's alpha = .78; (g) Assignments, Cronbach's alpha = .65; and (h) Examinations, Cronbach's alpha = .75. Internal consistency for the four new dimension sections were: (i) Diversity, Cronbach’s alpha = .82; (j) Ethics/Integrity, Cronbach’s alpha = .79; (k) Technology, Cronbach’s alpha = .83; and (l) Active learning, Cronbach’s alpha = .78. As noted above, the internal consistency for the four new dimensions was calculated in the pilot study as well as the main study.

Teaching excellence in general is difficult to validate since no universal criterion of teaching effectiveness has been established (Marsh, 1984). Therefore, construct validation studies have attempted to relate student ratings to other measures assumed to indicate teaching effectiveness. Evidence for long-term stability of student ratings can be interpreted as a validity measure. Marsh and Overall (1980) and Marsh, Fleiner, and Thomas (1979) reported the results of two studies that support the assertion of the validity of student ratings.
The modified SEEQ instrument used in the present study also appears to have face validity as the current researcher developed the instrument using the results of previous studies that have examined the characteristics that students and faculty identify as reflecting good courses and effective teaching (e.g., Eison & Stephens, 1988; Marsh, 1982; Marsh, 1987; Perlman & McCann, 1998; Young & Shaw, 1999). Additionally, since the instrument used in this study is a modified version of the SEEQ, it was assumed that reliability issues would be similar to those of the SEEQ. The pilot study data assessed this assumption.

**Data Collection Procedures**

Prior to the collection of data, permission to conduct this study was granted from the Institutional Review Board for Research Involving Human Subjects at the University of South Florida and approved by the administration of the community college at which data were collected. Since the present study employed an anonymous survey, there did not appear to be any conditions that would pose a problem to the protection of participants involved in the study. Participants were told that their answers would be anonymous and that all data collected would remain confidential.

Prior to the data collection, a contact person (designated by the college) from the community college site, the college Vice President of Academic Affairs, was contacted to gain his cooperation in conducting this research study. He was provided with an overview of the study and the survey instrument. All methodological and ethical concerns related to the research were discussed with the college contact. The contact person assisted the researcher in obtaining participants from college.

The researcher distributed the questionnaires in classes during weeks 10 through
12 of the fall 2004 semester. Students were informed that the goal of this study was to explore students' views of teaching excellence. They were told that they were not rating the course they were currently enrolled in or the instructor of that course. They were instructed to respond to the questionnaire in general terms, indicating the degree to which each survey item was important to the concept of teaching excellence. Students were informed that their participation was completely voluntary and that they could choose to discontinue participation at any point during the data collection. All foreseeable risks of participation and possible benefits of the research were explained to participants.

Participants were told that they were completing an anonymous survey and that all data collected would remain confidential. An informed consent form was solicited from each student participant. The survey booklet was distributed by the researcher and students were instructed on how to complete the questionnaire. The students were notified that instructors and/or the educational institution would not view their individual responses and that all responses would be kept confidential. Students were informed that their institution would be provided with a summary of students' responses as a whole without personal (student) identifiers. Students in the pilot testing stage only were asked to write the last five digits of their student identification number on the questionnaire for tracking purposes (i.e., to gather test-retest reliability data). Other demographic data about the participants were collected. These data included: participants’ age, gender, ethnicity, number of community college credit hours completed, reasons for taking classes at the community college, and number of hours employed each week. Students were told that the questionnaire survey should take them no more than 15 minutes to complete. Upon completion of the questionnaire and Informed Consent Form, the participants were asked
to place their materials in an envelope designated for each particular course section. Informed consent forms were placed in a separate envelope and not placed with the survey form. After all students had completed the questionnaire, the researcher collected the envelopes.

After the completion of the analysis of all student evaluations, the resulting aggregated data were shared with the instructors of the courses at the participating institution so that they could review the data to enhance and modify (if they choose to) their courses.

*Analysis Procedures*

The student survey form data were scored by hand and converted to an Excel spreadsheet. The Excel spreadsheet was then transferred into SPSS (SPSS version 13) for further analysis. A discussion of the descriptive statistics, including central tendency, variability, and shape of the distribution is undertaken in the results section. Measures of central tendency included: mean, mode, and median. Measures of variability included: range, variance, and standard deviation. The shape of the distribution included a discussion of the skewness and kurtosis of the distribution.

Data analyses were conducted to address each of the three research questions posed in the proposed study. Research questions 2 and 3 were analyzed utilizing Mplus (Muthen & Muthen, 1998) statistical software to conduct confirmatory factor analyses.

*Research Question 1 - Perceptions of Teaching Excellence*

The first research question asked “based on community college students' perceptions, what instructor qualities or course attributes, as deemed by Marsh's SEEQ (1982) and additional items that have been added, are most central to teaching
excellence?” To analyze the results of the first research question, responses from community college students on 45 survey items were analyzed to determine which items were of greatest importance to these undergraduates to describe teaching excellence. Overall means were computed and ranked in order from highest to lowest.

Research Questions 2 and 3 - Confirmatory Factor Analysis of SEEQ Used With Community College Students

A confirmatory factor analysis (research question number 2) was conducted to determine goodness of fit with the 8 and 12 dimension models, respectively. The goodness of fit refers to the comparison of obtained data and a hypothesized factor model. If the obtained data fit into the hypothesized model, then the model is not rejected. Conversely if the fit is poor the model is rejected. Goodness of fit is explained more thoroughly in the upcoming paragraphs. The current study analyzed the goodness of fit for the factor model proposed for community college students’ perceptions of teaching excellence. A second confirmatory factor analysis was conducted to answer research question number three. The confirmatory factor analysis was conducted and the goodness of fit of the proposed factor structure associated with the modified SEEQ that contains four new dimensions (diversity, ethics/integrity, technology, and active learning) was evaluated. Diagrams of the models can be found in figures 1 and 2.

Confirmatory factor analysis is used to test a hypothesized factor structure (Kline, 1993, p. 80). Within the confirmatory factor analysis, there are specific hypotheses that can be tested. A chi-square goodness-of-fit test was used in the current study to assess the overall fit of the model (for community college students) and to compare nested models. The chi-square statistic allows a test of the null hypothesis (H0) that a given
model provides an acceptable fit of the observed data (Long, 1983). A comparison of the observed covariance with the estimated covariance will be used to assess the fit of the model. In addition to the Chi-square goodness of fit test, other measures of fit were utilized as well. These measures included the Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA).

Assumptions of the goodness of fit tests are as follows (Kline, 1993, p. 95):

1. Where the original data are normally distributed the maximum likelihood method seems to yield a reliable $\chi^2$. Where the distribution is not normal the generalized least squares method may be preferable.

2. For these statistical tests to be reliable, an N of 100 is suggested as minimum, and this is only where simple models with two factors, say, are proposed. Where models are more complex Loehlin (1987) argues that 500 is not an unreasonable sample size.

Since the study utilized a sample of 1047 students, the aforementioned assumption has been met. However, normality may not be met even if the sample size is large.

Confirmatory factory analysis appears to be an appropriate statistical analysis to assess research question number three.

The confirmatory factor analysis was conducted using Mplus software (Muthen & Muthen, 1998). The steps for the confirmatory factor analysis for the proposed study are as follows:

1. The confirmatory factor analysis begins with a well-defined set of first-order factors in which the each factor is inferred on the basis of multiple indicators. The first-order factors are shown in Figure 1. Figure 1 shows that the eight dimensions of the
SEEQ instrument are correlated. As discussed in Marsh (1991), confirmatory factor analysis of the original version of the SEEQ provided strong support for the idea that student evaluations of teaching effectiveness are multidimensional and that one or even a small number of factors cannot adequately explain students' responses.

2. The CFA in this study used the covariance matrix of the items for analysis.

3. Overall fit was evaluated using the $\chi^2$ (Chi square) statistic, Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA). Parameter estimates including loadings, correlations among factors, and uniqueness or residual variance for items were examined.

4. If a priori models do not fit adequately, it may be necessary to develop a posteriori model to achieve acceptable levels of fit. Particularly, if parameter estimates for a priori and a posteriori models differ in important ways, the results should be interpreted carefully and cross-validated with additional data. To improve fit, additional parameters, specifically, factor loadings and correlated uniqueness can be added to the model. While modifications will be discussed in this paper, the author did not run additional models due to the fact that the confirmatory factor analysis was used to determine whether fit was adequate or not.

5. A second confirmatory factor analysis was conducted with the modified version of the SEEQ with the addition of the ethics/integrity, diversity, active learning, and technology dimensions. The first-order factors are shown in Figure 2. Figure 2 shows that the 12 dimensions of the modified SEEQ instrument (including the ethic/integrity, diversity, active learning, and technology dimensions added) are correlated.
Research Question 4 - Influence of Demographics on Perceived Teaching Excellence

The fourth research question in the present study addresses the question, is there a relationship between various demographic factors and each of the 12 dimensions on the teaching excellence survey? Multiple regression was used to examine the relationship between each of the 12 dimensions of teaching excellence and the following predictors: (a) gender, (b) age, and (c) ethnicity (e.g., African American, Caucasian, Hispanic, Native American, or Other), (d) employment status, and (e) number of credit hours completed. Descriptions of these predictor variables are summarized in Table 1. Prior to conducting the multiple regression, multicolinearity among the predictors, normality of the dependent variables, and linearity of the predictor dependent variables relationships were examined. Dummy variables for ethnicity, gender, and employment status were created for this analysis.

The assumptions that underline the regression procedure include the following (Glass & Hopkins, 1995):

1) The Y scores are independent and normally distributed along the regression line, meaning the residuals are normally distributed.
2) If the predicted values are plotted on the X-axis and Y values on the vertical axis, there is a linear relationship between the Y's and the predicted values. In other words, residuals will have a mean of zero at all points along the straight regression line.
3) The variance of the residuals are uniform for all predicted values. This is known as homoscedasticity.
CHAPTER FOUR

RESULTS

The purposes of this quantitative study were to (a) examine community college students’ perceptions of teaching excellence; (b) examine the underlying factor structure of the perceptions of teaching excellence held by community college students to determine goodness of fit against a factor structure previously established with university students using the SEEQ (Marsh, 1991); (c) examine the underlying factor structure of the perceptions of teaching excellence for community college students with the addition of four dimensions not included in the original SEEQ; and (d) examine whether community college students' demographic characteristics relate to perceptions of teaching excellence.

Internal Consistency of Dimensions in the Main Study

Prior to the final analysis of the data, it was important to determine if internal consistency was adequate enough to permit further analysis. Internal consistency for the eight original SEEQ dimension sections were: (a) Learning, Cronbach's alpha = .65; (b) Enthusiasm, Cronbach's alpha = .78; (c) Organization, Cronbach's alpha = .67; (d) Individual rapport, Cronbach's alpha = .78; (e) Group interaction, Cronbach's alpha = .87; (f) Breadth, Cronbach's alpha = .81; (g) Assignments), Cronbach's alpha = .78; and (h) Examinations, Cronbach's alpha = .74. Internal consistency for the four new dimension sections were: (i) Diversity, Cronbach’s alpha = .85; (j) Ethics/Integrity, Cronbach’s alpha = .80: (k) Technology, Cronbach’s alpha = .83;
(l) Active learning, Cronbach’s alpha = .66. The Cronbach’s alphas can be found in Table 2. As can be noted by the Cronbach’s alpha results reported here, there was sufficient internal consistency within the 12 dimension to continue further analysis of the data.

*Descriptive Statistics of the Study Participants*

The sample for this study consisted of 1047 community college students enrolled at one community college in central Florida. The sample consisted of 698 (66%) females and 349 (34%) males. Participants ranged in age from 17 to 77 with a mean of 22.57 and a standard deviation of 7.52. A complete breakdown of participants’ demographic data can be found in Table 2. The demographics of the student sample utilized in this study closely mirrored the demographics of the student population at the community college at which data were collected.

*Community College Students’ Perception of Teaching Excellence*

The first research inquiry examined the question, “based on community college students' perceptions, what instructor qualities or course attributes, as deemed by Marsh's SEEQ (1982b) and additional items that have been added are most central to teaching excellence? To analyze the results of the first research question, item means for the 45 items for the total sample were computed and then ranked in order from highest to lowest. Table 3 presents the rank order of each of the 45 items.

Participants in the current study chose a number of items that they rated as strongly related to teaching excellence. Twelve items were ranked with means of 4.25 or above. The top 12 items (with their associated dimensions) were:

1) The instructor is fair and unbiased in his/her treatment of all students (Diversity).
2) The instructor's explanations are clear (Organization/Clarity).

3) The instructor demonstrates respect for all students (e.g., not demeaning to either individuals or subgroups) (Diversity).

4) The methods for evaluating student’s work are fair and appropriate (Examinations).

5) The instructor is enthusiastic about teaching the course (Enthusiasm).

6) You are able to learn and understand the subject materials in the course (Learn/Value).

7) The course materials are well prepared and carefully explained (Organization/Clarity).

8) The instructor's style of presentation holds your interest during class (Enthusiasm).

9) You learn something in the course, which you consider valuable (Learn/Value).

10) The instructor makes students feel welcome in seeking help/advice outside the classroom (Rapport).

11) Feedback on evaluations/graded materials is valuable (Examinations).

12) The instructor is dynamic and energetic in conducting the course (Enthusiasm).

As can be seen in the highest ranked items, students rated Diversity items as two out of the highest three items. Three out of four Diversity items appear among the top 15 responses. The top ranked item in this study was “the instructor is fair and unbiased in his/her treatment of all students.” Among the top 12 items ranked by students, were multiple items from the Instructor Enthusiasm, Examination, and Organization of the Course dimensions. Among the top 15 items, students ranked three items from the
Ethics/Integrity dimensions as one of the important elements of teaching excellence.

A detailed discussion of these results and their relationship to prior studies of teaching excellence can be found in Chapter Five.

Participants also identified items that were not ranked high in their association with teaching excellence. The bottom 6 ranked items had means of 3.50 or less. These items (with their associated dimensions) included:

1) The instructor uses various forms of writing activities to enhance learning (Active).

2) The instructor has students work with partners or in groups to enhance learning (Active).

3) The instructor gives lectures that facilitate note taking (Organization/Clarity).

4) Instructional resources on the World Wide Web are used to promote student learning (Technology).

5) Electronic communications (e.g., email, WebCT) is used to promote interaction and discussion (Technology).

6) The course helps me develop and refine my skills in using technology (Technology).

Among the lowest ranked items were items from the Active Learning and Technology dimensions. The three lowest ranked items were from the Technology dimension with the means between 3.08 ($SD = 1.11$) and 3.18 ($SD = 1.09$). It also appears the community college students believe that instructors who facilitate note taking and who use active learning activities (e.g., working in groups and the use of writing assignments) ranked among the lowest rated items in their relationship to teaching
excellence. Although Active Learning and Technology dimensions were the lowest ranked in the study, their means were still high enough to suggest that community college students find these dimensions of moderate importance. A detailed discussion of these results is provided in Chapter Five.

Additionally, responses from community college students were grouped into 12 dimensions which were analyzed to determine which dimensions were most important to teaching excellence. The descriptive statistics for each of the 12 dimensions are presented in Table 2. Overall means were obtained and ranked in order from highest to lowest. As can be seen in Table 2, the dimension Examinations was ranked highest \(M = 4.33, \ SD = .66\). Students ranked the dimension of Technology as lowest \(M = 3.35, \ SD = .85\). A detailed discussion of these results is provided in Chapter Five.

Confirmatory Factor Analysis

Research questions two and three examined the underlying factor structure of the perceptions of teaching excellence held by community college students using confirmatory factor analysis (CFA). The analysis of data was completed using Mplus (Muthen & Muthen, 1998). Confirmatory factor analysis was conducted to determine goodness of fit of the underlying factor structure of the perception of teaching excellence held by community college students. This procedure allows a test of the null hypothesis that a given model provides an acceptable fit of the observed data. Goodness of fit can be determined by several measures. Adequate fit exists when the following conditions are met: \(\chi^2\) is 0; the ratio of \(\chi^2\) to degrees of freedom is 2 or less; Root Mean Square Error of Approximation (RMSEA) is less than .05; and/or the Comparative Fit Index (CFI) is greater than .90. The Standardized Root Mean Square Residual (SRMR) was less than
.08. The proposed factor model used in this study was similar to the factor structure model previously established with university students using the SEEQ (Marsh, 1991). The confirmatory factor analysis of the perceptions of community college students using Marsh’s original eight dimensions (research question 2) was conducted with a sample size of 1047. The analysis used a covariance matrix and the variables appeared normally distributed. The estimation method used was maximum likelihood (Kline, 1993). There were no convergence problems or improper solutions revealed in the analysis. The analysis of model fit revealed a Chi-square test of model fit with a value of 1787.21 ($df = 349$). Additionally, the Comparative Fit Index (CFI) was .89. The RMSEA (Root Mean Square Error of Approximation) was 0.06 with a 90 percent confidence interval of 0.06 to 0.066. The SRMR (Standardized Root Mean Square Residual) was .06. All question loadings with their corresponding dimension were significant at the $p < .05$ level. Correlations between the dimensions (range from .13 to .39) were significant at the $p < .05$ level. The model results for the eight dimensions with standardized estimates and standard errors are presented in Table 4. The model diagram for the standardized estimates and standard errors is presented in Figure 4. The correlation matrix for eight dimensions is presented in Table 5. For comparison, a correlation matrix from a factor analysis of the original SEEQ dimensions (Marsh, 1991) is presented in Table 6. The CFA did not test Marsh’s model exactly but compared a model that was similar to the Marsh’s model. Determining goodness of fit is a complicated process. While the CFA results do not suggest a perfect fit of the model similar to the Marsh’s model, the results suggest a reasonable or marginal fit of the model. In comparison with the CFA analysis in the current study, a previous study (Marsh, 1991) using a LISREL CFA analysis of
eight of the original SEEQ dimensions, revealed a Chi-square test of model fit with a value of 4828.22 ($df = 524$), TLI (Tucker-Lewis index) = .847, and a RNI (relative noncentrality index) = .865 and these results suggested that a priori model was not fully adequate. Correlations from the CFA, in the present study, were higher than the correlations among eight dimensions in previous studies conducted by Marsh (1991). Therefore, the results tend to support the fact that the SEEQ factor model obtained with community college students actually had a better fit than the original priori model obtained by previous research (Marsh, 1991) employing university students.

The top 10 model modification indices (MIs) for factor loading are presented in Table 7. These MIs suggest that questions may load on another factor in addition to the one that it has originally been loaded on. Through the creation of a new loading connecting the suggested dimension and item, a loss of one degree of freedom for each new loading will result and a better fit to the model (through reduction of the Chi-square value) can be achieved. Both the primary factor (a priori) loading and the secondary factor loadings for the top 10 MIs are shown in Table 7. A frequency graph presents the distribution of the model modification indices (MIs) for the factor loadings in Figure 5. As noted in Figure 5, there were a large number of modifications indices with a value of 10 or less. These modification indices would only be included if their inclusion was theoretically meaningful. Although it is beyond the scope of this study to run additional CFAs, any new model runs should include at least some (especially with high MI values) of the suggested model indices to achieve a better fit. Such modifications will make the model more complex. The implications of this finding will be discussed in detail in Chapter Five.
The top 10 modification indices (MIs) for covariances of uniqueness are presented in Table 8. The MI suggests that the uniquenesses of pairs of items covary. Through the inclusion of covariances for pairs of uniquenesses, there is a loss of one degree of freedom, but each change will result in a better fit to the model (through reduction of the Chi-square value). A frequency graph presents the distribution of the model modification indices for covariances of uniquenesses in Figure 6. As noted in Figure 6, a large number of suggested modifications are 10 or less. These modification indices would only be included if their inclusion was theoretically meaningful. Although it is beyond the scope of this study to run additional CFAs, any new model runs might consider including covariance terms to achieve a better fit. Such modifications will make the model more complex. The implications of this finding will be discussed in detail in Chapter Five.

A second confirmatory factor analysis (research question 3) was conducted to determine goodness of fit for the factor model underlying perception of teaching excellence for community college students with the addition of four new dimensions (diversity, ethics/integrity, technology, and active learning) not included in the original SEEQ (1982). The confirmatory factor analysis of the perceptions of community college students using Marsh’s original eight dimensions plus the four new dimensions was completed with a sample size of 1047. The analysis used a covariance matrix and the variables appeared normally distributed. The estimation method used was maximum likelihood. There were no convergence problems or improper solutions revealed in the analysis. The analysis of model fit revealed a Chi-square test of model fit with a value of 4024.74 (df = 879). Additionally, the Comparative Fit Index was .86. The RMSEA
(Root Mean Square Error of Approximation) estimate was .058 with a 90 percent confidence interval of 0.05 to 0.06. The Standardized Root Square Residual was .06. All question loadings by their corresponding dimension were significant at the \( p < .05 \) level. Correlations of each of the 12 dimensions to one another (range from .11 to .39) were also found to be significant at the \( p < .05 \) level. The model diagram for the standardized estimates and standard errors is presented in Figure 6. The model results for Marsh’s original 8 dimensions plus the 4 new dimensions with standardized estimates and standard errors are presented in Table 9. The correlation matrix for the 12 dimensions is presented in Table 10. The CFA did not test Marsh’s structure but compared a model that was similar to the Marsh model. Determining goodness of fit is a complicated process. While the CFA results do not suggest a perfect fit with the model similar to the Marsh model, the results suggest a reasonable or marginal fit of the model. Correlations from the CFA, in the present study, were higher than the correlations among eight dimensions in previous studies conducted by Marsh (1991). Therefore, the results tend to support the fact that the SEEQ factor model obtained in current study employing community college students actually had a better fit than the original priori model obtained by previous research (Marsh, 1991) employing university students.

The top 10 model modification indices (MIs) for the factor loading for the 12 dimension model are presented in Table 11. Theses MIs suggest that questions may load on another factor in addition to the one that it has originally been loaded on. Through the creation of new loadings connecting the suggested dimension and item, a loss of one degree of freedom for each new loading will result and a better fit to the model (through reduction of the Chi-square value) can be achieved. Both the primary
factor (a priori) loading and the secondary factor loadings for the top 10 MIs are shown in Table 11. A frequency graph presents the distribution of the model modification indices for factor loadings in Figure 7. As noted in Figure 7, there were a large number of modifications indices with a value of 10 or less. These modification indices would only be included if their inclusion was theoretically meaningful. Although it is beyond the scope of this study to run additional CFA’s, any new model runs should include at least some (especially with high MI values) of the suggested model indices to achieve a better fit. Such modifications will make the model more complex. The implications of this finding will be discussed in detail in Chapter Five.

The top 10 model modification indices (MIs) for covariances of uniquenesses are presented in Table 12. These MIs suggest that the uniquenesses of the pairs of items covary. Through the inclusion of covariances for pairs of uniquenesses, there is a loss of one degree of freedom, but each change will result in a better fit to the model (through reduction of the Chi-square value). A frequency graph presents the distribution of the model modification indices for covariances of uniquenesses in Figure 8. As noted in Figure 8, there are a large number of modifications indices with a value of 10 or less. These modification indices would only be included if their inclusion was theoretically meaningful. Although it is beyond the scope of this study to run additional CFAs, any new model runs might include modifications to achieve a better fit. Such modifications will make the model more complex. The implications of this finding will be discussed in detail in Chapter Five.
Relations between Demographic Factors and Perceived Teaching Excellence

The fourth research question was: is there a relationship between demographic factors and students’ perceptions of teaching excellence?

Regression Analysis of Predictor Factors

Multiple regression was used to examine the relationship between each dimension of teaching excellence and the following predictor variables: (a) age, (b) gender, (c) ethnicity, (d) reason for attendance, (e) number of credit hours completed, and (f) employment status. For the multiple regression analysis, Ethnicity was separated into African American, Hispanic, Native American, and Other while Caucasian was the reference factor. Reason for Attendance was separated into AA or AS Terminal degree, Personal, Certificate, Career, and University while AA degree with continuation to a four-year institution was the reference factor. Gender was separated with Female being chosen as the reference factor. Preliminary analyses began by looking at the multicolinearity of the independent variables and the distribution of the variables. The linearity of the relationships was also examined. The current model assumed additive effects with no interactions. Results were examined to see how much of the total variation in the dependent variable was explained by the set of predictors (Multiple R²). Residuals were examined to check the assumptions underlying the regression. The analyses of these dimensions are presented here and a detailed discussion of these analyses can be found in Chapter Five.

Learning

A multiple regression analysis was conducted to evaluate how well demographic variables predicted student responses to the dimension Learning (survey item numbers 1
through 4). The predictors were the demographic factors, while the criterion variable was the overall student responses to the dimension Learning. Standardized coefficients (Beta) results for Learning are presented in Table 13. The combined demographic factors account for only a small portion ($R^2 = .034$) of the variability in this dimension. The student demographic variables of Male (Gender), Age, and Native American (Ethnicity) were significantly related to the dimension of Learning. Females rated Learning as more important than males ($Beta = .097, p < .01$); Older students rated Learning as more important than younger students ($Beta = .090, p < .05$); and Native American students rated this dimension as less important compared to the Caucasian reference group ($Beta = -.084, p < .05$). No additional predictor variables (Reason for Attendance, Semester Hours or Employment) were significantly related to Learning.

**Analysis of predictor factors of Age, Gender, and Ethnicity**

An analysis of the Age predictor factor was undertaken to investigate how students’ age related to significant differences on student responses to the Learning dimension. For the purposes of this analysis, ages were grouped into seven clustered groups. Table 14 presents the seven age clusters, their means and their standard deviations.

A one factor ANOVA was conducted using the predictor variable Age. Age was significantly related to Learning, $F(6, 1040) = 4.46, p < .01$. Follow-up Scheffe test comparisons were calculated for mean differences between the seven age groupings. Significant differences were found between age groups 1 (17 to 21) and 3 (28 to 33) with a mean difference of -.29 ($p < .05$). The results suggest that Group 3 rated items from the Learning dimension higher in terms of their relevance to teaching excellence, than did
students in the lowest age grouping (Group 1). In reviewing the overall descriptive statistics, students in Group 1 (17-21) had the lowest mean among the groups while students in Group 7 (52-77) had the highest mean. This result appears to suggest that the perception of the importance of the dimension Learning related to overall teaching excellence is higher in older students versus younger students. While the results were statistically significant, Age only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

Further analysis of the Male (Gender) predictor factor was undertaken to investigate how males and females differed significantly on their responses to items in the Learning dimension. On the dimension, the female \((n = 698)\) mean was 4.18 \((SD = 0.57)\) and the male \((n = 349)\) mean was 4.06 \((SD = 0.63)\). The Cohen’s D effect size estimate was .19. Therefore, the effect size was small. Although the mean difference between the two groups was small, the results suggest that females tend to rank items on the Learning dimension higher in terms of the relevance to teaching excellence than do their male counterparts. While the results were statistically significant, due to the small effect size, the practical significance of the results is minimal at best.

Further analysis of the Native American (Ethnicity) predictor factor was undertaken to investigate how students’ ethnicity related to significant differences on student responses to the Learning dimension. Table 15 presents the means and standard deviations for the Ethnicity groups. Significant differences were found between Native Americans and the reference group of Caucasian with a mean difference of .46. In reviewing the overall descriptive statistics, students classified as Native American had the lowest mean among the groups while students classified as Caucasian had the third
highest mean among Ethnic groups. The results suggest that Caucasian students rated
items from the Learning dimension, higher in terms of their relevance to teaching
excellence, than did students classified as Native American. Additionally, the results
suggest that since groups Hispanic and Other had higher means than Caucasian, these
groups also rated items from the Learning dimension higher in terms of their relevance to
teaching excellence. While the results were statistically significant, Ethnicity only
accounted for a small portion of the total variance and the practical significance of the
results is minimal at best.

*Instructor Enthusiasm*

A multiple regression analysis was conducted to evaluate how well demographic
variables predicted student responses to the dimension Instructor Enthusiasm (survey
item numbers 5 through 8). The predictors were the demographic factors, while the
criterion variable was the overall student responses to the dimension Instructor
Enthusiasm. The combined demographic factors account for only a small portion
($R^2 = .010$) of the variability in this dimension. Standardized coefficients (Beta) results
for Instructor Enthusiasm are presented in Table 13. The analysis found that
demographic variable of Other (Ethnicity) was the only significant predictor variable for
student responses to the dimension of Instructor Enthusiasm. Students classified as Other
in ethnicity rated the Instructor Enthusiasm dimension higher than Caucasian students
($Beta = .080, p < .05$).

*Analysis of the predictor factor of Ethnicity*

Further analysis of the Other (Ethnicity) predictor factor was undertaken to
investigate how students’ ethnicity related to significant differences on student responses
to the Instructor Enthusiasm. Table 16 presents the means and standard deviations for the Ethnicity groups. Significant differences were found between Other and the reference group of Caucasian with a mean difference of .22. In reviewing the overall descriptive statistics, students classified as Other had the highest mean (4.45) of the Ethnicity groups. Students classified as Caucasian had the second lowest mean (4.23) among Ethnicity groups. The results suggest that students classified as Other rated items from the Instructor Enthusiasm dimension higher in terms of their relevance to teaching excellence, than did students classified as Caucasian. While the results were statistically significant, Ethnicity only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

**Organization/Clarity**

A multiple regression analysis was conducted to evaluate how well demographic variables predicted student responses to the dimension Organization/Clarity (survey item numbers 9 through 12). The predictors were the demographic factors, while the criterion variable was the overall student responses to the dimension Organization/Clarity. The combined demographic factors account for only a small portion ($R^2 = .028$) of the variability in this dimension. Standardized coefficients (Beta) results for Organization/Clarity are presented in Table 13. The student demographic variables of Male (Gender), Age, African American (Ethnicity), and Hispanic (Ethnicity) were significantly related to the dimension of Organization/Clarity. Males (Gender) rated Organization/Clarity as less important than females ($Beta = .115, p < .05$); older students rated Organization/Clarity as more important than younger students ($Beta = .098, p < .05$); African American rated this dimension as more important than Caucasian students ($Beta = .078, p < .05$); and
Hispanic students rated this dimension as more important than did Caucasian students ($Beta = .083, p < .01$). No additional predictors (Reason for Attendance, Employment, or Semester Hours) were significantly related to Organization/Clarity.

*Analysis of the predictor factors of Gender, Age, and Ethnicity*

An analysis of the Male (Gender) predictor factor was undertaken to investigate how males and females differed significantly on their responses to items in the Organization/Clarity dimension. On the dimension, the female ($n = 698$) mean was 4.14 ($SD = .59$) and the male ($n = 349$) mean was 3.97 ($SD = .63$). The Cohen’s D effect size estimate was .19. Therefore, the effect size was small. Although the mean difference between the two groups were small, the results suggest that females tend to rank items on the Clarity dimension higher in terms of the relevance to teaching excellence than do their male counterparts. While the results were statistically significant, the effect size was small and the practical significance of the result is minimal at best.

An analysis of the Age predictor factor was undertaken to investigate how students’ age related to significant differences on student responses to the Organization/Clarity dimension. For the purposes of this analysis, ages were grouped into seven clustered groups. Table 17 presents the means and standard deviations for the seven Age groups.

A one factor ANOVA was conducted using the predictor variable Age. Age was significantly related to Organization/Clarity, $F(6, 1040) = 3.01, p < .01$. Follow-up Scheffe test comparisons were calculated for mean differences of the seven age groupings. Significant differences were found between age groups 1 (ages 17 to 21) and 3 (ages 28 to 33) with a mean difference of -.54 ($p < .05$). The results suggest that
Group 3 rated items from the Organization/Clarity dimension, higher in terms of their relevance to teaching excellence, than did students in the lowest age grouping (Group 1). In reviewing the overall descriptive statistics, students in group 1 (17-21) had the lowest mean among the groups while students in group 7 (52-77) had the highest mean. This result appears to suggest that the perception of the importance of the dimension Organization/Clarity related to overall teaching excellence is higher in older students versus younger students. While the results were statistically significant, Age only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

An analysis of the African American (Ethnicity) and Hispanic (Ethnicity) predictor factors was undertaken to investigate how students’ ethnicity related to significant differences on student responses to the Clarity dimension. Table 18 presents the means and standard deviations for the Ethnicity groups. Significant differences were found between both African American and Hispanic and the reference group of Caucasian with a mean difference of .27 and .23 respectively. In reviewing the overall descriptive statistics, students classified as African American and Hispanic had the highest means (4.32 and 4.82 respectively) of the Ethnicity groups. Students classified as Caucasian had the second lowest mean (4.05) among Ethnicity groups. The results suggest that African American and Hispanic students rated items from the Organization Clarity dimension higher in terms of their relevance to teaching excellence, than did students classified as Caucasian. Although the results appear to suggest that the perception of the importance of the dimension Organization/Clarity related to overall teaching excellence is different among ethnic groups, the results should not be over
stated. While the results were statistically significant, Ethnicity only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

*Individual Rapport*

A multiple regression analysis was conducted to evaluate how well demographic variables predicted student responses to the dimension Individual Rapport (survey item numbers 13 through 16). The predictors were the demographic factors, while the criterion variable was the overall student responses to the dimension Individual Rapport. The combined demographic factors account for only a small portion ($R^2 = .010$) of the variability in this dimension. Standardized coefficients (Beta) results for Individual Rapport are presented in Table 13. The student demographic variable of Male (Gender) was significantly related to the dimension of Individual Rapport ($Beta = .069, p < .05$). No additional predictors (Ethnicity, Reason for Attendance, Age, Employment, or Semester Hours) were significantly related to the dimension Individual Rapport.

*Analysis of the predictor factor of Gender*

An analysis of the Male (Gender) predictor factor was undertaken to investigate how males and females differed significantly on their responses to items in the Individual Rapport dimension. On the dimension, the female ($n = 698$) mean was 4.02 ($SD = .74$) and the male ($n = 349$) mean was 3.92 ($SD = .77$). The Cohen’s D effect size estimate was .26. Therefore, the effect size was small. Although the mean difference between the two groups were small, the results suggest that females tend to rank items on the Individual Rapport dimension higher in terms of the relevance to teaching excellence.
than do their male counterparts. While the results were statistically significant, the effect size was small and the practical significance of the results is minimal at best.

**Group Interactions**

A multiple regression analysis was conducted to evaluate how well demographic variables predicted student responses to the dimension Group Interactions (survey item numbers 17 through 20). The predictors were the demographic factors, while the criterion variable was the overall student responses to the dimension Group Interaction. The combined demographic factors account for only a small portion ($R^2 = .014$) of the variability in this dimension. Standardized coefficients (Beta) results for Group Interactions are presented in Table 13. The student variables of Male (Gender) and African American (Ethnicity) were significantly related to the dimension of Group Interaction. Males (Gender) rated Group Interaction as less important than females ($Beta = .072, p < .05$). African American (Ethnicity) students rated Group Interaction as more important than Caucasians ($Beta = .064, p < .05$). No additional predictors (Age, Reason for Attendance, Employment, or Semester Hours) were significantly related to Group Interaction.

**Analysis of the predictor factors of Gender and Ethnicity**

An analysis of the Gender predictor factor was undertaken to investigate how males and females differed significantly on their responses to items in the Group Interaction dimension. On the dimension, the female ($n = 698$) mean was 3.95 ($SD = .77$) and the male ($n = 349$) mean was 3.82 ($SD = .85$). The Cohen’s D effect size estimate was .15. The effect size was small. Although the mean difference between the two groups were small, the results suggest that females tend to rank items on the Group
Interaction dimension higher in terms of the relevance to teaching excellence than do their male counterparts. While the results were statistically significant, the effect size was small and the practical significance of the results is minimal at best.

An analysis of the African American (Ethnicity) predictor factor was undertaken to investigate how students’ ethnicity related to significant differences on student responses to the Group dimension. Table 19 presents the means and standard deviations for the Ethnicity groups. Significant differences were found between African American students and the reference group of Caucasian students with a mean difference of .28. In reviewing the overall descriptive statistics, students classified as African American and had the highest means (4.19) of the Ethnicity groups. Students classified as Caucasian had the second lowest mean (3.91) among Ethnicity groups. The results suggest that African American students rated items from the Group dimension higher in terms of their relevance to teaching excellence, than did students classified as Caucasian. While the results were statistically significant, Ethnicity only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

**Breadth of Coverage**

A multiple regression analysis was conducted to evaluate how well demographic variables predicted student responses to the dimension Breadth of Coverage (survey item numbers 21 through 24). The predictors were the demographic factors, while the criterion variable was the overall student responses to the dimension Breadth of Coverage. Standardized coefficients (Beta) result for Breadth of Coverage is presented in Table 13. The combined demographic factors account for only a small portion ($R^2 = .026$) of the variability in this dimension. The student demographic variables of African
American (Ethnicity), Other (Ethnicity), Certificate (Reason) and Number of Semester Hours were significantly related to the dimension of Breadth of Coverage. African American (Ethnicity) rated Breadth of Coverage as more important than did Caucasian students \((Beta = .069, p < .05)\). Students who classified themselves as Other (Ethnicity) rated Breadth of Coverage as more important than Caucasian students \((Beta = .069, p < .05)\). Students identified as AA-Continue to Four year rated Breadth of Coverage as more important than did students who identified themselves as Certificate (Reason) seeking \((Beta = -.075, p < .05)\). Students with higher number of Semester Hours completed rated Breadth of Coverage as more important than students who have completed 12 semester hours or less \((Beta = .69, p < .05)\). No additional predictors (Reason for Attendance, Employment, or Gender) were significantly related to Breadth of Coverage.

**Analysis of the predictor factors of Ethnicity, Reason and Semester Hours**

An analysis of the African American (Ethnicity) and Other (Ethnicity) predictor factors was undertaken to investigate how the students’ ethnicity related to significant differences on student responses to the Breadth of Coverage dimension. For the purposes of this analysis, ethnic backgrounds were grouped into five clustered groups. Table 20 presents the means and standard deviations for the Ethnicity groups.

Significant differences were found between both African American and Other and the reference group of Caucasian with a mean difference of .23 and .24 respectively. In reviewing the overall descriptive statistics, students classified as African American and Hispanic had the highest means (3.99 and 4.00 respectively) of the Ethnicity groups. Students classified as Caucasian had the second lowest mean (3.76) among Ethnicity
groups. The results suggest that African American and Other students rated items from the Breadth dimension higher in terms of their relevance to teaching excellence, than did students classified as Caucasian. While the results were statistically significant, Ethnicity only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

An analysis of the Semester Hours predictor factor was undertaken to investigate how students’ number of semester hours completed related to significant differences on student responses to the Breadth of Coverage dimension. For the purposes of this analysis, semester hours completed were grouped into five clustered groups. Table 21 presents the means and standard deviations for the Semester Hour groups.

Follow-up Scheffe test comparisons were calculated for mean differences of the semester hour groupings. Significant differences were found between age groups 1 (less than 12 hours) and 4 (37 to 48 hours) with a mean difference of .27 \( (p < .05) \). The results suggest that Group 4 (37 to 48 hours) rated items from the Breadth of Coverage dimension, higher in terms of their relevance to teaching excellence, than did students in the lowest Hours grouping (Group 1). In reviewing the overall descriptive statistics, students in group 1 (less than 12 hours) had the lowest mean among the groups while students in group 4 (37 to 48 hours) had the highest mean. These results appear to suggest that the perception of the importance of the dimension Breadth of Coverage related to overall teaching excellence is higher in students who have completed more than 12 semester hours versus students who have completed less than 12 semester hours of college work. While the results were statistically significant, Semester Hours only accounted for a small portion of the total variance and the practical significance of the
results is minimal at best.

An analysis of the Certificate (Reason for Attendance) predictor factor was undertaken to investigate how the subjects’ reason for attendance related to significant differences on student responses to the Breadth of Coverage dimension. For the purposes of this analysis, reasons were grouped into six clustered groups. Table 22 presents the means and standard deviations for the Reason groups.

Significant differences were found between Certificate and the reference group of AA-Continue to Four-year students with a mean difference of -.36. In reviewing the overall descriptive statistics, students classified as Four year had the third highest mean (3.76) of the Reason groups. Only AA – Terminal (mean = 3.81) and Upgrade (mean = 3.86) had higher means. Students classified as Certificate had the lowest mean (3.40) among Reason groups. The results suggest that Four year, AA Terminal and Upgrade students rated items from the Breadth of Coverage dimension higher in terms of their relevance to teaching excellence, than did students classified as Certificate reason. While the results were statistically significant, Reason only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

Assignments/Reading

A multiple regression analysis was conducted to evaluate how well demographic variables predicted student responses to the dimension Assignments/Reading (survey item numbers 25 and 26). The predictors were the demographic factors, while the criterion variable was the overall student responses to the dimension Assignments. Standardized coefficients (Beta) results for Assignments/Reading are presented in Table 13. The combined demographic factors account for only a small portion ($R^2 = .030$) of the
variability in this dimension. Student demographic variables of Age and Male (Gender) were significantly related to the dimension of Assignment. Older students rated Assignments as more important than younger students \((Beta = .094, p < .01)\). Males (Gender) rated Assignments as less important than females students \((Beta = .134, p < .01)\). No additional predictors (Ethnicity, Reason for attendance, Employment, or Semester Hours) were significantly related to the dimension of Assignment.

*Analysis of the predictor factors of Age and Gender*

An analysis of the Age predictor factor was undertaken to investigate how subjects’ age related to significant differences on student responses to the Assignments/Reading dimension. For the purposes of this analysis ages were grouped into seven clustered groups. Table 23 presents the means and standard deviations for the Age groups.

A one factor ANOVA was conducted on the predictor variable Age. Age was significantly related to Assignment, \(F(6, 1040) = 2.98, p < .01\). Follow-up Scheffe test comparisons were calculated for mean differences of the seven age groupings. Significant differences were not found between any of the Age groups. No further analysis was conducted.

An analysis of the Gender predictor factor was undertaken to investigate how males and females differed significantly on their responses to items in the Assignments/Reading dimension. On the dimension, the female \((n = 698)\) mean was 4.04 \((SD = .83)\) and the male \((n = 349)\) mean was 3.79 \((SD = .96)\). The Cohen’s D effect size estimate was .29. The effect size was small. Although the mean difference between the two groups were small, the results suggest that females tend to rank items on the
Assignments/Reading dimension higher in terms of the relevance to teaching excellence than do their male counterparts. While the results were statistically significant, the effect size was small and the practical significance of the results is minimal at best.

**Examinations**

A multiple regression analysis was conducted to evaluate how well demographic variables predicted student responses to the dimension Examinations (survey item numbers 27 through 29). The predictors were the demographic factors, while the criterion variable was the overall student responses to the dimension Examinations. Standardized coefficients (Beta) results for Examinations are presented in Table 13. The combined demographic factors account for only a small portion \( R^2 = .022 \) of the variability in this dimension. The analysis found that the demographic variable of Male (Gender) as the best predictor variable for student responses to the dimension Examinations. All demographic variables together accounted for a small portion \( R^2 = .022 \) of the variability in this dimension. Males rated Examinations as less important than females \( (Beta = .108, p < .01) \). No additional predictors (Ethnicity, Reason for Attendance, Employment, Age, or Semester Hours) were significantly related to the dimension of Examination.

**Analysis of the predictor factor of Gender**

An analysis of the Male (Gender) predictor factor was undertaken to investigate how males and females differed significantly on their responses to items in the Examinations dimension. A t-test using pooled variances was conducted on the predictor variable Gender. On the dimension, the female \( (n = 698) \) mean was 4.38 \( (SD = .62) \) and the male \( (n = 349) \) mean was 4.23 \( (SD = .72) \). The Cohen’s D effect size estimate was
.23. The effect size was small. Although the mean difference between the two groups were small, the results suggest that females tend to rank items on the Examinations dimension higher in terms of the relevance to teaching excellence than do their male counterparts. While the results were statistically significant, the effect size was small and practical significance of the results is minimal at best.

**Technology**

A multiple regression analysis was conducted to evaluate how well demographic variables predicted student responses to the dimension Technology (survey item numbers 30 through 34). The predictors were the demographic factors, while the criterion variable was the overall student responses to the dimension Technology. Standardized coefficients (Beta) results for Technology are presented in Table 12. The combined demographic factors account for only a small portion ($R^2 = .030$) of the variability in this dimension. Student demographic variables of Age, African American (Ethnicity), Hispanic (Ethnicity) and Personal (Reason for Attendance) were significantly related to the dimension of Technology. Older students rated Technology as more important than younger students ($Beta = .080, p < .05$). African American (Ethnicity) rated Technology as more important than Caucasian students ($Beta = .091, p < .01$). Hispanic (Ethnicity) students rated Technology as more important than Caucasian students ($Beta = .071, p < .05$). Students who are taking courses for Personal (Reason for Attendance) reasons rated Technology as less important than students who classified themselves as continuing on to Four year ($Beta = -.069, p < .05$). No additional predictors (Employment, Gender, or Semester Hours) were significantly related to the dimension of Technology.

*Analysis of the predictor factors of Age, Ethnicity, and Reason*
An analysis of the Age predictor factor was undertaken to investigate how the subjects’ age related to significant differences on student responses to the Technology dimension. For the purposes of this analysis, ages were grouped into seven clustered groups. Table 24 presents the means and standard deviations for the Age groups.

A one factor ANOVA was conducted on the predictor variable Age. Age was significantly related to Technology, $F(6, 1040) = 2.10, p < .05$. Follow-up Scheffe test comparisons were calculated for mean differences of the seven age groupings. Significant differences were not found between any of the Age groups. No further analysis was conducted.

An analysis of the African American (Ethnicity) and Hispanic (Ethnicity) predictor factors was undertaken to investigate how students’ ethnicity related to significant differences on student responses to the Technology dimension. Table 25 presents the means and standard deviations for the Ethnicity groups.

Significant differences were found between both African American and Hispanic and the reference group of Caucasian with a mean difference of .41 and .24 respectively. In reviewing the overall descriptive statistics, students classified as African American and Hispanic had the highest means (3.73 and 3.56 respectively) of the Ethnicity groups. Students classified as Caucasian had the second lowest mean (3.32) among Ethnicity groups. The results suggest that African American and Hispanic students rated items from the Technology dimension higher in terms of their relevance to teaching excellence, than did students classified as Caucasian. While the results were statistically significant, Ethnicity only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.
An analysis of the Reason for Attendance predictor factor was undertaken to see if the subjects’ reason for attendance related to significant differences on student responses to the Technology dimension. For the purposes of this analysis, reasons were grouped into six clustered groups. Table 26 presents the means and standard deviations for the Reason groups.

Significant differences were found between Personal reasons and the reference group of AA-Four-year students with a mean difference of -.38. In reviewing the overall descriptive statistics, Four-year students had the third highest mean (3.35). Students classified as Upgrade and AA Terminal had the highest means (3.66 and 3.48 respectively) of the Reason groups. Students classified as Personal had the lowest mean (2.97) among Reason groups. The results suggest that AA-Four-year, Upgrade and AA Terminal students rated items from the Technology dimension higher in terms of their relevance to teaching excellence, than did students classified as Personal reason. While the results were statistically significant, Reason only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

Diversity

A multiple regression analysis was conducted to evaluate how well demographic variables predicted student responses to the dimension Diversity (survey item numbers 35 through 38). The predictors were the demographic factors, while the criterion variable was the overall student responses to the dimension Diversity. Standardized coefficients (Beta) results for Diversity are presented in Table 13. The combined demographic factors account for only a small portion ($R^2 = 0.30$) of the variability in this dimension. The analysis found that demographic variables of Male (Gender) and Age were the best
predictor variables for student responses to the dimension Diversity. Males (Gender) rated Diversity as less important than females (Beta = .131, p < .01). Older students rated Diversity as more important than younger students (Beta = .066, p < .05). No additional predictors (Ethnicity, Reason for Attendance, Employment, or Semester Hours) were significantly related to the dimension diversity.

Analysis of the predictor factors of Age and Gender

An analysis of the Age predictor factor was undertaken to investigate how the subjects’ age related to significant differences on student responses to the Diversity dimension. For the purposes of this analysis ages were grouped into seven clustered groups. Table 27 presents the means and standard deviations for the Age groups.

A one factor ANOVA was conducted using the predictor variable of Age. Age was significantly related to the dimension of Diversity, $F(6, 1040) = 1.47, p < .18$. Follow-up Scheffe test comparisons were calculated for mean differences of the seven age groupings. Significant differences were not found between any of the Age groups. No further analysis was conducted.

An analysis of the Male (Gender) predictor factor was undertaken to see if males and females differed significantly on their responses to items in the Diversity dimension. On the dimension, the female ($n = 698$) mean was 4.37 ($SD = .64$) and the male ($n = 349$) mean was 4.17 ($SD = .78$). The Cohen’s D effect size estimate was .28. The effect size was small. Although the mean difference between the two groups were small, the results suggest that females tend to rank items on the Diversity dimension higher in terms of the relevance to teaching excellence than do their male counterparts. While the results were
statistically significant, the effect size was small and the practical significance of the results is minimal at best.

_Ethics/Integrity_

A regression analysis was conducted to evaluate how well demographic variables predicted student responses to the dimension Ethics/Integrity (survey item numbers 39 through 42). The predictors were the demographic factors, while the criterion variable was the overall student responses to the dimension Ethics/Integrity. Standardized coefficients (Beta) results for Ethics/Integrity are presented in Table 13. The combined demographic factors account for only a small portion \( R^2 = .029 \) of the variability in this dimension. Student demographic variables of Age and Certificate (Reason for Attendance) were significantly related to the dimension of Ethics/Integrity. Older students rated Ethics/Integrity as more important than younger students \((Beta = .102, p < .01)\). Students who classified themselves as attending courses to obtain a Certificate (Reason for Attendance) rated Ethics/Integrity as less important than continuing Four year students \((Beta = -.065, p < .05)\). No additional predictors (Gender, Ethnicity, Employment, or Semester Hours) were significantly related to the dimension of Ethics/Integrity.

_Analysis of predictor factors of Age and Reason for Attendance_

A further analysis of the Age predictor factor was undertaken to see if the subjects’ ages related to significant differences on student responses to the Ethics/Integrity dimension. For the purposes of this analysis ages were grouped into seven clustered groups. Table 28 presents the means and standard deviations for the Age groups.
A one factor ANOVA was conducted using the predictor variable of Age. Age was significantly related to Ethics/Integrity, $F(6, 1040) = 2.94, p < .01$. Follow-up Scheffe test comparisons were calculated for mean differences of the seven age groupings. Significant differences were not found between any of the Age groups. No further analysis was conducted.

An analysis of the Certificate (Reason for Attendance) predictor factor was undertaken to investigate how the subjects’ reason for attendance related to significant differences on student responses to the Ethics dimension. For the purposes of this analysis, reasons were grouped into six clustered groups. Table 29 presents the means and standard deviations for the Reason groups.

Significant differences were found between Certificate and the reference group of AA- Four-year students with a mean difference of -.32. In reviewing the overall descriptive statistics, students classified as AA- Four-year had a second highest mean (3.97). AA Terminal had the highest mean (4.02) of the Reason groups. Students classified as Certificate had the lowest mean (3.65) among Reason groups. The results suggest that AA-Four- year and AA Terminal students rated items from the Ethics/Integrity dimension higher in terms of their relevance to teaching excellence, than did students classified as Certificate reason. While the results were statistically significant, Reason only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

Active Learning

A multiple regression analysis was conducted to evaluate how well demographic variables predicted student responses to the dimension Active Learning (survey item
numbers 43 through 45). The predictors were the demographic factors, while the criterion variable was the overall student responses to the dimension Active Learning. Standardized coefficients (Beta) results for Active Learning are presented in Table 13.

The combined demographic factors account for only a small portion ($R^2 = .029$) of the variability in this dimension. The analysis found that demographic variables of Male (Gender), Age, Hispanic (Ethnicity) and Other (Ethnicity) were the best predictor variables for student responses to the dimension Active Learning. Older students rated Active Learning as more important than younger students ($Beta = -.068, p < .05$). Males (Gender) rated Active Learning as less important than female students ($Beta = .092, p < .01$). Hispanic students rated Active Learning as more important than Caucasian students ($Beta = .081, p < .01$). Students who classified themselves as Other rated Active Learning as more important than Caucasian students ($Beta = .065, p < .05$). No additional predictors (Reason for Attendance, Employment, or Semester Hours) were significantly related to active learning.

**Analysis of predictor factors of Age, Gender, and Ethnicity**

An analysis of the Age predictor factor was undertaken to investigate how the subjects’ age related to significant differences on student responses to the Active Learning dimension. For the purposes of this analysis, ages were grouped into seven clustered groups. Table 30 presents the means and standard deviations for the Age groups.

A one factor ANOVA was conducted on the predictor variable Age. Age was significantly related to Active Learning, $F(6, 1040) = 2.21, p < .05$. Follow-up Scheffe test comparisons were calculated for mean differences of the seven age groupings.
Significant differences were not found between any of the Age groups. No further analysis was conducted.

An analysis of the Gender predictor factor was undertaken to investigate how males and females differed significantly on their responses to items in the Active Learning dimension. On the dimension, the female \( (n = 698) \) mean was 3.70 \( (SD = .82) \) and the male \( (n = 349) \) mean was 3.53 \( (SD = .84) \). The Cohen’s D effect size estimate was .19. The effect size was small. Although the mean difference between the two groups were small, the results suggest that females tend to rank items on the Active Learning dimension higher in terms of the relevance to teaching excellence than do their male counterparts. While the results were statistically significant, the effect size was small and the practical significance of the results is minimal at best.

An analysis of the Hispanic and Other predictor factors was undertaken to investigate how students’ ethnicity related to significant differences on student responses to the Active Learning dimension. For the purposes of this analysis, ethnic backgrounds were grouped into five clustered groups. Table 31 presents the means and standard deviations for the Ethnicity groups.

Significant differences were found between both Hispanic and Other and the reference group of Caucasian with a mean difference of .29 and .24 respectively. In reviewing the overall descriptive statistics, students classified as Hispanic had the highest means (3.90 and 3.85 respectively) of the Ethnicity groups. Students classified as Caucasian had the second lowest mean (3.61) among Ethnicity groups. The results suggest that Hispanic student and students classified as Other rated items from the Active Learning dimension higher in terms of their relevance to teaching excellence, than did
students classified as Caucasian. While the results were statistically significant, Ethnicity only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

Chapter Summary

To analyze the results of the first research question, item means for the 45 items on the questionnaire were computed and then ranked in order from highest to lowest. Table 3 presents the rank order of each of the 45 items.

Participants in the current study chose a number of items that they rated as important to teaching excellence. Twelve items were ranked with means of 4.25 or above. While some of the perceptions of community college students were similar to perceptions documented in prior studies with university students, some differences were revealed. Student’s rated Diversity items as two out of the highest three items. Three out of four Diversity items appear among the top 15 responses. The top ranked item in this study was “the instructor is fair and unbiased in his/her treatment of all students.” Among the top 12 items ranked by students, were multiple items from the Instructor Enthusiasm, Examination, and Organization of the Course dimensions. Among the top 15 items, students ranked three items from the Ethics/Integrity dimensions as one of the important elements of teaching excellence.

Participants also identified items that were ranked as high in their association with teaching excellence. The bottom 6 ranked items had means of 3.50 or less. Among the lowest ranked items were items from the Active Learning and Technology dimensions. The three lowest ranked items were from the Technology dimension. Although Active Learning and Technology dimensions were the lowest ranked in the study, their means
were still high enough to suggest that community college students find these dimensions of moderate importance.

Additionally, responses from community college students were grouped into 12 dimensions that were analyzed to determine which dimensions were most important to teaching excellence. The descriptive statistics for each of the 12 dimensions are presented in Table 2. Overall means were obtained and ranked in order from highest to lowest. As can be seen in Table 2, the dimension Examinations was ranked highest. Students ranked the dimension of Technology as lowest. A detailed discussion of these results and their relationship to prior studies of teaching excellence can be found in Chapter Five.

Research questions two and three examined the underlying factor structure of the perceptions of teaching excellence held by community college students using confirmatory factor analysis (CFA). The CFA results for an 8 dimensional model similar to the Herbert Marsh’s model suggest a reasonable or marginal fit of the model. Correlations from the CFA were higher than the correlations among eight dimensions in previous studies conducted by Marsh (1991). Therefore, the results tend to support the fact that the SEEQ factor model obtained in this study employing community college students was indeed similar to the obtained results by previous research (Marsh, 1991) employing university students. Possible modification induces for factor loading and covariances of uniquenesses pertaining to the 8 dimensional model were discussed.

A second confirmatory factor analysis (research question 3) was conducted to determine goodness of fit for the factor model underlying perception of teaching excellence for community college students with the addition of four new dimensions
(diversity, ethics/integrity, technology, and active learning) not included in the original SEEQ (1982). While the CFA results do not suggest a perfect fit with the model similar to the Marsh model, the results suggest a reasonable or marginal fit of the model. Correlations discovered in the CFA were higher than the correlations among eight dimensions in previous studies conducted by Marsh (1991). Therefore, with respect to research question three, the results tend to support the fact that the factor model obtained in this study employing community college students was indeed similar to the proposed factor model. Possible modification induces for factor loading and covariances of uniquenesses pertaining to the 8 dimensional model were discussed.

Finally, to answer the fourth research question, multiple regression analysis was employed to determine what demographic variables could be used to predict students’ responses to items on each of the 12 dimensions. The multiple regression analyses of six demographic variables suggested that five of these variables (e.g., Age, Gender, Ethnicity, Reason for Attendance and Semester Hours completed) had some influence as to how students responded to the teaching excellence survey items. $R^2$’s ranged from .010 (Instructor Enthusiasm and Individual Rapport) to .034 (Learning). Employment was the only demographic variable that did not significantly relate to any of the 12 dimensions. A summary of the predictors for each dimension is shown in Table 32. Gender was the most prominent predictor variable as it was found to be a significant predictor (Females > Males) in eight of the teaching excellence dimensions. However, in all eight dimension analyses, the effect sizes were determined to be small. Therefore, the significance of these findings should not be overstated. Age and Ethnicity were found to be the second most prominent predictor variables. Analysis revealed significant differences between
Age groups and between Ethnicity groups in seven of the 12 dimensions. Reason for Attendance was found to be a predictor of two dimensions and Semester Hours was found to be a predictor of one dimension, respectively. While many of dimensions had demographic predictor variables that were shown to be statistically significant, the practical significance of the results is probably minimal at best. Further discussion of these results can be found in Chapter 5.
CHAPTER 5

DISCUSSION

The consumer driven educational system has placed greater emphasis on a quality classroom environment and teaching excellence. With so many educational choices available today, students can select the best institution to meet their needs educationally and personally. Creating appropriate course materials and an environment that is conducive to learning has taken on a greater emphasis to today’s colleges and universities. Educators have found themselves in a climate where student evaluations of courses and instructors have gained increasing importance as they are often indicators of whether or not students stay at their institution. Community colleges have seen significant increases in enrollment over the last 20 years, but they too have to be concerned about students’ attitudes and perceptions of their institutions. Yet the majority of research related to students’ perceptions of quality courses and teaching excellence has been conducted at the university level. There has been a lack of research aimed at discovering students’ attitudes and perceptions of excellence at the community college level. The main purpose of this study was to examine this population which has been mostly neglected.

The purposes of this quantitative study were to (a) examine community college students’ perceptions of teaching excellence; (b) examine the underlying factor structure of the perceptions of teaching excellence held by community college students to determine goodness of fit against a factor structure previously established with university
students using the SEEQ (Marsh, 1991); (c) examine the underlying factor structure of the perceptions of teaching excellence for community college students with the addition of four dimensions not included in the original SEEQ; and (d) examine whether community college students' demographic characteristics are related to perceptions of teaching excellence. This study was inspired by and expanded upon one recent study (Levy & Peters, 2002) that examined the use of course evaluations for determining the characteristics university students associated with the best college courses. In addition, this study attempted to overcome limitations found in educational literature. For example, the vast majority of prior studies examining teaching excellence utilized university students only in their sample and community college students, for the most part, have been neglected by these research efforts. It was my intuition that community college students differ in their perceptions of teaching excellence from their university counterparts. While this study did not directly compare community college students and university students, it did assess perceptions of a large group of community college students. Through the use of a survey instrument modeled after Marsh’s SEEQ, students at one central Florida community college were asked to respond to 45 items related to teaching excellence and six demographic items (Age, Gender, Ethnicity, Number of Semester Hours completed, Reason for Attendance, and Employment status). Four major research questions related to perceptions of teaching excellence were examined in the current study. Several interesting facts about students’ perception of teaching excellence were revealed through analysis of the data that were collected from community college students. A discussion of these facts follows in the next section of this chapter.
Interpretation of the Results

Community College Students’ Perception of Teaching Excellence

The first research inquiry examined the question, based on community college students’ perceptions, what instructor qualities or course attributes, as deemed by Marsh's SEEQ (1982b) and additional items that have been added are most central to teaching excellence? To address the results of the first research question, responses to the 45 response items were analyzed to determine which factors were most important to undergraduate students in determining teaching excellence. After the means for each factor dimension were obtained, they were listed in ranked order from highest to lowest in Table 2.

After reviewing the resulting data, two questions appear especially relevant at this time; what do the obtained results mean and how do the obtained results relate to other studies that have looked at students’ perceptions of teaching excellence? It is impossible to compare directly the present findings to past research, because the current instrument included dimensions that were not always included on prior surveys (e.g., diversity, ethics, active learning, and technology) and the fact that previous studies (for the most part) used university students as their research sample. More importantly, direct comparison is impossible because the current study did not ask students to rate specific instructors, but rather had students indicate the relative importance of each survey item to teaching excellence. The next section will discuss the current findings and relate them to prior research efforts, beginning with the highest ranked items.

Participants in the current study rated a number of items that they rated as being most strongly related to teaching excellence. Twelve items were ranked with means of
4.25 or above on the 5.00 rating scale. The top twelve items (with their associated dimensions) were:

1) The instructor is fair and unbiased in his/her treatment of all students (Diversity).
2) The instructor's explanations are clear (Organization).
3) The instructor demonstrates respect for all students (e.g., not demeaning to either individuals or subgroups) (Diversity).
4) The methods for evaluating student work are fair and appropriate (Examinations).
5) The instructor is enthusiastic about teaching the course (Enthusiasm).
6) You are able to learn and understand the subject materials in the course (Learning).
7) The course materials are well prepared and carefully explained (Organization).
8) The instructor's style of presentation holds your interest during class (Enthusiasm).
9) You learn something in the course, which you consider valuable (Learning).
10) The instructor makes students feel welcome in seeking help/advice outside the classroom (Rapport).
11) Feedback on evaluations/graded materials is valuable (Examinations).
12) The instructor is dynamic and energetic in conducting the course (Enthusiasm).

As can be seen in the highest ranked items, students rated two diversity items as being among the three items most highly rated. In addition, three of the instrument’s four diversity items appear among the top 15 most highly rated responses. The top ranked item in this study was “the instructor is fair and unbiased in his/her treatment of all students.” The item, “the instructor demonstrates respect for all students (e.g., not demeaning to either individuals or subgroups)” was the third highest ranked item in the
current study. Similarly, Yankowski (1992) reported that “respects students” was the second highest of the factors considered by students to be most important to teaching excellence. Roueche, Milliron, and Roueche (2003) suggested that instructors should be respectful of diversity and for each student’s feelings of self-worth. The findings in the current study appear to support this recommendation. Perlman (1998) found that students cited bias, sexism, and racism as major concern to them and a common student pet “peeve.” Chism (1999) suggested that to help students succeed, institutions must: (a) make students feel welcome and honor and include their perspectives and experiences; (b) treat students as individuals, rather than representatives of a social group; (c) make sure that students from diverse backgrounds have ample opportunity to participate in all class activities; and (d) strive for fair treatment through the use of appropriate communications. Sheehan and DuPrey (1999) and Kolitch (1999) found diversity to be such an important issue in higher education today that diversity items were included in the evaluation forms used in their research studies. It should be noted that it is difficult to compare the community college students in this study with university students relative to the perceived importance of these issues since few studies with university students have included a diversity dimension on their surveys and questionnaires.

One further issue about diversity needs to be addressed here. The argument could be made that the highest rated diversity items were not related specifically to the Diversity dimension. While this argument could be made, the model indices for factor loadings did not suggest that items 35 and 38, which were the highest ranked diversity items, would load on any other dimensions. Only item 37 (“the instructor encourages discussion of diversity issues when appropriate to course content”), which was the lowest
ranked diversity item, loaded on any other dimensions. Item 37 had factor loadings on the Breath, Group, Ethics, and Technology dimensions. Additionally, items 35 and 38 are similar to diversity items used in prior research. The panel of experts contacted in the pilot study as believed that these items represented diversity issues. For these reasons, I believed that these items were valid as diversity items and therefore included in this research. The results of the current study suggest that community college students see diversity as an important issue and it is recommended that diversity items of this type be included in future measures of both teaching excellence as well as student evaluations of courses and instructors.

Students responding to the current research questionnaire also viewed Ethics/Integrity as especially important elements of teaching excellence. Among the top 15 rated items, students ranked three items from the Ethics/Integrity dimension as important elements of excellence. As reported in Chapter Two, numerous studies have reported extremely high rates of academic dishonesty and cheating among higher education students (e.g., Brown, 1995; Davis 1993; Jendrek, 1992; Moffatt, 1990). Moffatt (1990) reported that as many as 33% of students surveyed stated that they had copied off another student’s exam. Of Moffatt’s student survey respondents, 21% reported that they had studied with the help of a past exam and 18% reported using a cheat sheet. Brown (1995) reported that 81% of students responding to a survey acknowledged having participated in a least one unethical practice more than “infrequently.” Due to the high rates of academic dishonesty, it is becoming increasingly important for faculty and institutions to address this problem. Interestingly, Svinicki (1999) suggested that teaching excellence is inherently linked to faculty members
following through with their ethical responsibilities to students. Svinicki outlined six main principles for faculty to follow in their responsibilities to students. These principles include: (a) encourage the free pursuit of learning; (b) demonstrate respect for students; (c) respect confidentiality; (d) model the best scholarly and ethical standards; (e) foster honest academic conduct and ensure fair evaluation; and (f) avoid exploitation, harassment, or discrimination. These ethical principles should be discussed with students and faculty members should model ethical behavior throughout the teaching careers. The findings of the current research, support the idea that community college students are concerned about ethics and integrity in the academic arena and this dimension is viewed as an important component of teaching excellence. These findings suggest also that faculty should visibly incorporate ethics/integrity into their classroom environment and teaching practices.

Also among the top 15 items ranked by students, there were multiple items from the Instructor Enthusiasm, Evaluation, and Organization of the Course dimensions. Consistent with previous research studies using university students (e.g., Long & Sparks, 1997; Marsh 1984, Marsh & Ware, 1982; Mueller, Roach, & Malone, 1971; Murray, 1983; Waters, Kemp, & Pucci, 1988; Weisz, 1989), the current study found that community college students similarly believe that instructor traits (i.e., sense of humor; entertaining; excited or enthusiastic about the materials, exhibits a caring attitude toward students, and are approachable) are strongly related to students’ perceptions of teaching effectiveness and excellence. As far as the traits listed above are concerned, both university students (suggested from prior research) and community college students agree that these traits are important. Additionally, the data from the current study suggest that
students prefer instructors to use a variety of teaching techniques (other than active learning) and not simply lecture all the time. This finding is consistent with the findings of earlier studies (e.g., Beishline & Holmes, 1997; McKeachie, 1994; Weisz, 1989). It might be anticipated that if students favor other learning modalities than lecture, they would presumably prefer active learning techniques. However, as previously discussed, active learning did not fair very well in the analysis of the data from this study. Analysis of the Active Learning items revealed that while students thought instructors using alternative approaches to traditional lectures were of great importance to teaching excellence, they rated specific active learning approaches such as writing assignments and group work as only moderately important to teaching excellence.

In their extensive literature review, Sherman, Armsted, Fowler, Barksdale, and Reif (1987) asserted that five characteristics truly defined teaching excellence. The five characteristics were (a) enthusiasm; (b) clarity of presentation; (c) preparation and organization; (d) stimulation of interest about the subject matter; and (e) knowledge, which can be broken down into two parts (the teacher’s grasp of the subject matter and the teacher’s love of, and passion for, the subject). These same characteristics can be seen among the top ten items of the current study.

Participants also identified items that were not a strongly associated with teaching excellence. The six items ranked lowest had means of 3.50 or less. These items (with their associated dimensions) included:

1) The instructor uses various forms of writing activities to enhance learning (Active).

2) The instructor has students work with partners or in groups to enhance learning (Active).
3) The instructor gives lectures that facilitate note taking (Organization).

4) Instructional resources on the World Wide Web are used to promote student learning (Technology).

5) Electronic communications (e.g., email, WebCT) is used to promote interaction and discussion (Technology).

6) The course helps me develop and refine my skills in using technology (Technology).

Among the lowest rated items were three items from the Technology dimension and two items from the Active Learning dimensions. This finding is surprising given the current emphasis on the use of technology in and out of the classroom throughout higher education. Findley (1995) stated that the appropriate use of supporting materials (multimedia, audio-visual and other educational resources) is an important and necessary element of teaching effectiveness. Chickering and Ehrmann (1996) called for the use of communication and information technology to be employed in ways that were consistent with the seven principles of good practice (Chickering & Gamson, 1987). Laurillard (1999) suggested that technology is an important portion of teaching excellence in the 21st century, and that faculty should exploit its use. Additionally, Roueche, Milliron, and Roueche (2003) stated that the bridge between classroom instruction and technology needs to be strengthened. These authors suggested an important link exists between teaching excellence and instructors keeping up to date and utilizing the latest technology to enhance learning. Students in the current research, for the most part, did not report that the use of technology figured prominently into their perceptions of teaching excellence. There is some irony in these results. As higher education has focused increasingly on technology in the classroom, students surveyed in the current study
reported that technology ranked lowest among the traits they associated with teaching excellence. However, even though technology was ranked lowest among the 12 dimensions, it still was rated as moderately important to teaching excellence.

The results related to technology in the current study should be interpreted with caution. The study used only one institution as the sample and it is possible that students attending other institutions may differ with regard to their use of technology. The participating community college has only a low to moderate level of technology integration (compared to other institutions) in terms of both equipment and effectiveness of use. It is possible that if this study was conducted at other institutions, the results might show that technology items would be ranked higher in its relationship to teaching excellence. Only additional research with an expanded sample can shed light on this issue. Also among the lowest rated items on the current survey were two items from the Active Learning dimension. This was surprise to this researcher, as most people would believe that active learning would be strongly related to excellence. The data from this study suggest that community college students see it as only moderately important. With the exception of one previous study, university students have identified active learning activities as associated with teaching excellence. As stated previously, this difference may be explained by the fact that university students (who have been the focus of much of the prior research) expect a certain degree of active learning in their classes where community college students do not. Many community college students are recent graduates of a public education system that seemingly places greater emphasis on standardized, high stakes testing programs than promoting active learning techniques. Another explanation for the low Active Learning rated may have to do with how students
interpreted the specific Active Learning items. Active Learning items may not be clearly operationalized and could be interpreted differently. For example, in questionnaire item 43 (“the instructor uses alternative approaches to traditional lectures during the class sessions); “alternative approaches” could be defined in several different ways. Lower ratings may have resulted simply because students were unclear about the meaning of “alternative approaches.” Since the Active Learning items are newly developed (as are the other three newly created dimensions) for this study, the items should be interpreted with caution.

While the research study that inspired the current study (Levy & Peters, 2002) did have three items related to active learning (e.g., course does not require in class presentations, the course did not have class activities, and instructors solely lectured) and a variety of other teaching techniques, their study did not include items from the other three new dimensions used in the present investigation. Interestingly, two of the active learning items in Levy and Peters were ranked lowest by students in their study. Eison and Stephens (1988) also reported that active learning items were ranked among the lowest items in a survey of 136 university students enrolled in honors classes. The current study also found that active learning items were ranked among the least important items by students. It appears the community college students believe that instructors facilitating note taking and employing other active learning activities (e.g., working in groups and the use of writing assignments) rank among the least important in terms of their relationship to teaching excellence. This finding is also consistent with the earlier research of Beishline and Holmes (1997) who found that students preferred not to participate in active learning activities. However, these results tend to be contrary to the
findings of Seldin (1999). Seldin reported that students rated instructors higher if they promoted active, hands-on student learning. This difference may be explained by the fact that university students (which have been the focus of much of the prior research) expect a certain degree of active learning in their classes whereas community college students may not. Many community college students are recent graduates of a public education system that does not place a heavy emphasis on active learning techniques. This is, however, speculation by the author part as there is no direct empirical evidence, at this time, to support this hypothesis. A future comparative study might examine if true differences exist between university and community college students, on this issue.

Finally, the examination of how students ranked the 12 dimensions with respect to their importance to teaching excellence revealed several notable observations. While prior studies (e.g., Long & Sparks, 1997; Marsh 1984, Marsh & Ware, 1982; Mueller, Roach, & Malone, 1971; Murray, 1983; Waters, Kemp, & Pucci, 1988; Weisz, 1989) have shown that students think examinations are important for teaching effectiveness, the community college students in the current study ranked examinations as the most important of the 12 dimensions. The two highest ranked Examination items was “the methods for evaluating student work are fair and appropriate” and “feedback on evaluations/graded materials is valuable.” Interestingly, both of these items require a subjective interpretation as to their meaning. The words “fair”, “appropriate”, and “feedback” could be interpreted differently. Depending upon students’ interpretation of the meaning of these items, the items could be ranked differently and this might influence how the dimension is ranked. It would be interesting to see how these items and the dimension would be ranked with the questions reworded so that it would not require a
subjective interpretation of the items.

Coming in a very close second in ranking, was the dimension Diversity (one of the dimensions not included in the original SEEQ). As previously discussed, community college students who participated in this study think diversity issues are closely related to their perceptions of teaching excellence. Ranked third thru sixth were dimensions that were included in the original SEEQ (e.g., Instructor Enthusiasm, Learning/Value, Organization/Clarity, and Individual Rapport) and have been reported in previous research as important elements of teaching effectiveness and teaching excellence (Sherman, Armsted, Fowler, Barksdale, & Reif, 1987). These findings were also consistent with earlier research studies (e.g., Long & Sparks, 1997; Marsh 1984, Marsh & Ware, 1982; Mueller, Roach, & Malone, 1971; Murray, 1983; Waters, Kemp, & Pucci; Weisz, 1989). Ranked seventh was the new dimension (not included in the original SEEQ) of Ethics/Integrity. As discussed previously, students want instructors to model ethical and integrity behaviors in the classroom. Following in the eighth through tenth rankings were the original SEEQ dimensions of Assignments/Readings, Group Interactions, and Breadth of Coverage. In the final two spots were the new dimensions Active Learning and Technology. Although these two dimensions were rated as moderately important to teaching excellence, it was rather surprising that these two dimensions were not ranked higher, given that colleges and universities have placed increasingly greater emphasis on these two areas and have increased their use across the disciplines.

In summary, with respect to research question one, community college students shared a number of perceptions of teaching excellence that were similar to their
university counterparts (as suggested by a review of the prior literature). However, as
anticipated by the author, the present findings also noted some important differences
between these two populations. First, diversity concerns were ranked high by the
participants in this study. The previous university based research literature did not reveal
a similar concern on the part of university students. This issue may simply be the fact the
previous research efforts with university students did not employ a great many diversity
related questions. On the other hand, this study may have shed light on an important
issue related to teaching excellence that has just recently become important to our
students and society in general. It would be interesting to now assess university students
on the relationship between diversity concerns and students’ perceptions of teaching
excellence to determine if similar results to the present findings would be found.

The second issue raised in the data analysis of the current research is the fact that
students rated technology related items as the lowest ranked items on the survey. As
institutions of higher education increasingly promote the use of technology in today’s
classrooms, students in the current research did not view technology as a major
contributor to teaching excellence. Whether this result is characteristic of community
college and university students in general is beyond the scope of the current study, but
this too is something that should be assessed in future research efforts.

A third issue of interest revealed by the current study is the fact that community
college students did not perceive active learning as being strongly associated with
teaching excellence. This was surprise to this researcher, as most people would believe
that active learning would be strongly related to excellence. The data from this study
suggest that community college students see it as only moderately important. Further
research with community college students is needed to assess whether this finding is a
general trend among 2-year college students or merely an isolated instance found at one
institution.

As previously stated, I postulated that community college students are different in
terms of their demographics (i.e., age and reasons for attendance) and their expectations
of how the classes are taught. Given that most community colleges have significantly
smaller classes compared to university classes, community college students theoretically
are more likely to experience more active learning and more individualized attention. If
the institutional environments differ, should you not expect differences in students’
expectations and perceptions of what elements are truly related teaching excellence?
Surprisingly, a remarkable sameness appeared between community college students in
this study and previous studies with university students conducted by Herbert Marsh.
Although some difference between these to groups emerged, the effect sizes were
relatively small. Operationally, the current study of perceptions of teaching excellence
did not directly measure the same variables of Marsh’s studies of the SEEQ (designed as
a faculty effectiveness instrument) and the results did allow indirect comparisons. A
direct comparison study to assess if differences truly exist between university students
and community college students in relation to active learning and the other dimensions
should be included in future research. If further studies of these two populations reveal
differences in their perceptions of teaching excellence, this would be an important
finding. Such a finding might suggest that education systems attempt to incorporate more
of those factors that students believe are important to teaching excellence, into the
curriculum and operation of university and community college classrooms.
Factor Models of Teaching Excellence

Factor Structure Using the Original SEEQ Items

Research question two was designed to examine the underlying factor model of the perceptions of teaching excellence held by community college students to determine goodness of fit against a factor model a previously established with university students using the SEEQ (Marsh, 1991). The proposed factor model used in this study is presented in Figure 1. A confirmatory factor analysis (CFA) was conducted to determine the goodness of fit of the underlying factor model of an eight dimension model of teaching excellence. The CFA did not test Marsh’s model exactly but compared a model that was similar to the Marsh’s model. The analysis used a covariance matrix and the estimation method used was maximum likelihood. The Chi-square test for model fit revealed a value of 1787.21 which is extremely high. However, the Chi-square test is not always the best technique for determining the goodness of fit. Determining goodness of fit is a complicated process. While the CFA results do not suggest a perfect fit of the model similar to the Marsh’s model, the results suggest a reasonable or marginal fit of the model. The Comparative Fit Index and Standardized Root Mean Square Residual also suggested that the factor model proposed in this study results in a reasonable or marginal goodness of fit. In comparison with the CFA analysis in the current study, a previous study (Marsh, 1991) using a LISREL CFA analysis of eight of the original SEEQ dimensions, revealed a Chi-square test of model fit with a value of 4828.22 ($df = 524$) and these results suggested that a priori model was not fully adequate. All question loadings with their corresponding dimensions were significant at the $p < .05$ level. Additionally, dimension correlations with each other dimension were significant at the
Correlations from the CFA, in the present study, were higher than the correlations among eight dimensions in previous studies conducted by Marsh (1991). Therefore, the results tend to support the fact that the factor model obtained with community college students actually had a better fit than the original priori model obtained by previous research (Marsh, 1991) employing university students.

However, as previously mentioned the goodness of fit indicators of the eight dimension factor model suggests that fit would be improved through modification suggested by the Modification Indices (MIs). In analyzing the modification indices, the data show correlated errors suggesting that further modifications are needed to the proposed model to achieve an improved overall goodness of fit. As suggested previously, there are a number of secondary factor loading and covariances of uniquenesses that, if included in the model, would reduce the Chi-square value enough to achieve an improved goodness of fit. It is beyond the scope of the current study to run further models based on suggested Modification Indices (MI), however any future attempts to run a confirmatory factor analysis (CFA) might consider including at least some of the modification indices that are theoretically meaningful. Factor loading MIs suggest some questions may load on another factor in addition to its specified loading. Through the inclusion of secondary loadings connecting the suggested dimension and item an improved model fit can occur. Table 6 presents the top 10 factor loading MIs. One of the more interesting factor loading MIs is with question 8, which reads: “the instructor’s style of presentation holds your interest in class.” Although this question originally loaded on the Instructor Enthusiasm dimension, it has secondary loadings on the Organization/Clarity, Learning, and Examination dimensions. It makes sense that this
question load on dimensions that would require interest and attention. Holding students attention aids in their understanding and learning the materials as well as doing well on examinations. Additionally, question 19 (students are encouraged to ask questions and are given meaningful answers) had secondary loadings on three dimensions. Although question 19 originally loaded on Group dimension, it has secondary loadings on the Examination, Clarity, and Learning dimensions. Asking questions and receiving meaningful answers make materials clearer, aid in the learning of the materials, and allows students to perform better on examinations.

The MIs for the covariances of uniquenesses suggest that the uniquenesses of pairs of items covary. Table 7 presents the top 10 covariances of uniqueness for pairs of questions. Among the top 10 covariances of uniqueness pairings, seven pairings covary within the same dimension. Only three of the item pairs covary between dimensions. Of these three pairing, the strongest covariance is between item 9 (e.g., “the instructor’s explanation is clear”) which loads on the Clarity dimension and item 4 (e.g., “you are able to learn and understand the subject materials in the course”) which loads on the Learning dimension. This covariance suggests that these two items are asking questions with similar meanings.

Although the analysis of the eight dimension factor model goodness of fit suggests a number of secondary factor loading and covariances of uniqueness, it is questionable whether significant modifications in the factor model would occur if these changes were made. As MI changes are made to a model, it becomes more complex. In this case, the slight improvements in fit caused by modifications are probably not worth complicating the model. It is beyond the scope of the current study to run further models
based on suggested Modification Indices (MI), however any future attempts to run a confirmatory factor analysis (CFA) might consider including at least some of the modification indices if they are theoretically meaningful.

A question that arises from the results of the eight dimension factor analysis is why does the resulting factor structure differ somewhat from the results of factor structure research of Marsh’s SEEQ (Marsh, 1991)? Five major reasons may account for the minor factor model difference between the current study and that of Marsh (1991).

First, the current survey instrument was modified from the original instrument (Marsh’s SEEQ). Marsh’s ninth dimension (difficulty/workload) was dropped from the current instrument as it is tied specifically to the course in which the student is currently enrolled. Because of the nature of this study, this dimension does not lend itself to addressing teaching excellence in a general way. Several of the items in the eight dimensions used in the current research were semantically modified to fit the purpose of this study (i.e., to measure students’ perceptions of the essential components of teaching excellence) rather than an instructor’s effectiveness. Additionally, the Likert rating scale was modified from Marsh's ratings of (1) Very Poor, (2) Poor, (3) Moderate, (4) Good, and (5) Very Good to a 5-point scale ranging from (1) of no importance, (2) of little importance, (3) of moderate importance, (4) of great importance, and (5) of extreme importance to evaluate the extent to which each item contributes to teaching excellence.

The second major difference between the current survey and the original SEEQ is that the directions/instructions given to participants of the current study differ from the instructions on the SEEQ. Primarily, this difference lies in the fact that with Marsh’s SEEQ students are asked to evaluate a specific course and an instructor while the current
research asked students to rank the survey items in terms of their relative importance to teaching excellence. While both instruments have face validity, the underlying intent of the questions differs. Because the current study measured students’ perceptions of teaching excellence rather than a specific instructor’s perceived teaching effectiveness, the underlying factor structures are likely to look different. As a future research effort, it would be interesting to give community college students the current survey with the directions/instructions from the SEEQ. The instructions would tell students to use the current survey form to evaluate their course and instructor as per Marsh’s work to see if the factor model by Marsh with university students would similarly describe the factor model obtained with community college students. This would be one way to evaluate the influence of the directions on the instrument has on the overall factor structure.

The third major difference between the current study and prior SEEQ research involves the institutional setting. Although there have been many studies conducted using the SEEQ, most if not all the studies have been conducted with university students. The current study sampled only community college students at one institution. It is quite possible that the different samples of students coupled with direction/instruction difference, mentioned previously, may account for the minor factor structure difference. Future studies should allow university students to take the current instrument with the instructions to identify factors related to teaching excellence. The factor structures of these university students could then be compared with the resulting factor structures from the current study to see if the structures appear similar.

The fourth reason the factor structures of the SEEQ and the current instrument may differ slightly is related to the time in which the investigations were completed. The
vast majority of research related to the factor structures of the SEEQ was conducted in the 1980’s and early 1990’s, while the current study was conducted in 2005. The time period in which the studies were conducted might have some relevance to the structure differences found in the two studies. To rule out the effect of time frame, it would be interesting to administer both the SEEQ and the current instrument to students in the present day to see if any (practical) significant differences continue to be noted between these instruments.

The fifth major difference between the current study and prior SEEQ research involves the participant students. Prior SEEQ research used university students as their sample, while the present study utilized community college students. Previously, I postulated that community college students and university students are simply different. The slight factor model differences may be explained by the fact that community college and university students have some different attitudes and perceptions.

*Factor Structure Using the Modified Version of the SEEQ*

Research question three was designed to examine the underlying factor structure of the perceptions of teaching excellence for community college students with the addition of four dimensions not included in the original SEEQ (Marsh, 1991). The proposed factor model used in this study is presented in Figure 2. A confirmatory factor analysis (CFA) was conducted to determine the goodness of fit of the underlying factor model of a 12 dimension model of teaching excellence. The analysis used a covariance matrix and the estimation method used was maximum likelihood. There were no convergence problems or improper solutions revealed in the analysis. The analysis of model fit revealed a Chi-square test of model fit with a value of 4024.74 (df = 879) which
is extremely high. However, the Chi-squared test is not always the best technique for determining the goodness of fit. Determining goodness of fit is a complicated process. While the CFA results do not suggest a perfect fit of the model similar to the Marsh’s model, the results suggest a reasonable or marginal fit of the model. The Comparative Fit Index and Standardized Root Mean Square Residual also suggested that the factor model proposed in this study results in a reasonable or marginal goodness of fit. In comparison with the CFA analysis in the current study, a previous study (Marsh, 1991) using a LISREL CFA analysis of eight of the original SEEQ dimensions, revealed a Chi-square test of model fit with a value of 4828.22 ($df = 524$) and these results suggested that a priori model was not fully adequate. All question loadings with their corresponding dimensions were significant at the $p < .05$ level. Additionally, dimension correlations with each other dimension were significant at the $p < .05$ level. Correlations (on the 8 dimensions shared with the SEEQ) from the CFA, in the present study, were higher than the correlations among eight dimensions in previous studies conducted by Marsh (1991). Therefore, the results tend to support the fact that the SEEQ factor model obtained with community college students actually had a better fit than the original priori model obtained by previous research (Marsh, 1991) employing university students.

However, as previously mentioned, the goodness of fit indicators of the 12 dimension factor model suggests that fit would be improved through modification suggested by the Modification Induces. In analyzing the modification indices, the data show covariances of pairs of error suggesting that further modifications to the proposed model are needed to achieve an improved overall goodness of fit. As suggested previously, there are a number of factor loading and covariances of uniquenesses that
would reduce the Chi-square value enough to achieve an improved goodness of fit. It is beyond the scope of the current study to run further models based on suggested Modification Indices (MI), however any future attempts to run a confirmatory factor analysis (CFA) might consider including at least some of the modification indices if they are theoretically meaningful. Factor loading MIs suggest some questions may load a second factor in addition to its specified loading. Through the inclusion of loadings connecting the suggested dimension and item, an improved model fit can occur. Such modifications would result in an improved goodness of fit, but would complicate the model significantly. One of the more interesting factor loading MIs is with question 37, which reads: “the instructor encourages discussion of diversity issues when appropriate to course content.” Although this question originally loaded on the Diversity dimension, it has secondary loadings on the Breadth, Group, Ethics, and Technology dimensions. It is difficult to draw a logical conclusion on how these four dimensions connect with this question given their broad and diverse topic areas. Additionally, question 8 (e.g., “instructor’s style of presentation holds your interest during class”) has secondary loadings on two other dimensions. Although question 8 originally loaded on the Enthusiasm dimension, it has secondary loadings on Clarity and Learning. This connection makes sense as both Clarity and Learning require the student’s attention and interest.

The MIs of covariances of the uniquenesses suggest that the uniquenesses of pairs of items covary. Table 11 presents the top 10 covariances of uniquenesses for pairs of questions. Among the top 10 covariances, nine pairs of covariance were within the same dimension. Only one of the item pairs was between dimensions. This pairing is between
item 9 (e.g., “the instructor’s explanation is clear”) which loads on the Clarity dimension and item 4 (e.g., “you are able to learn and understand the subject materials in the course”) which loads on the Learning dimension. This covariance suggests that these two items are asking questions with similar meanings.

Although the analysis of the 12 dimension factor model goodness of fit suggests a number of secondary factor loading and covariances of uniqueness, it is questionable whether significant factor model modification would occur if these secondary factors were included in the model. As changes involving additional parameters are made to a model, it becomes more complex. In this case, the slight improvements in fit caused by modifications are probably not worth complicating the model. It is beyond the scope of the current study to run further models based on suggested Modification Indices (MI), however any future attempts to run a confirmatory factor analysis (CFA) might consider including at least some of the modification indices if they are theoretically meaningful.

A question that arises from the results of the 12 dimension factor analysis is why does the resulting factor structure differ slightly from the results of factor structure research of Marsh’s SEEQ (Marsh, 1991)? In addition to the five major possible contributors previously mentioned in the discussion of the results of the eight dimension model (e.g., dimension and item modifications, time, place, and directions/instructions differences), the simple addition of the four new “21st century dimensions” (e.g., diversity, technology, active learning, and ethics/integrity) appears to modify the factor structure model.

In summary, both the proposed eight dimension (question 2) model and the proposed twelve dimensions (question 3) model have reasonable/marginal factor model
fits in their respective analyses. Both models could be modified in an attempt to improve fit as suggested by the modification indices for each of the respective model. Such model modifications would make each model more complex. In this case, the slight improvements in fit caused by modifications are probably not worth complicating the model. Further exploratory or confirmatory factor analyses are beyond the scope of the current research, but might be addressed in any future studies in this area of research.

*Relationship between Student Demographics and Perceptions of Teaching Excellence*

Research question four was designed to examine whether community college students’ demographic characteristics are related to perceptions of teaching excellence. It was expected that the 12 dimensions of teaching excellence would be associated with the predictor variables of (a) age, (b) gender, (c) ethnicity, (d) reason for attendance, and (e) number of credit hours completed. The results were examined to look for multicollinearity of the independent variables and the distribution of the variables. The linearity of the relationships was examined. Results were examined to see how much of the total variation in the dependent variable was explained by the set of predictors (Multiple $R^2$). Residuals were examined to check the assumptions underlying the regression. Predictor variables were further examined to determine whether differences exist between groups of subjects.

Interestingly, numerous studies have investigated student variables and their relationship to student ratings/evaluations. These studies have shown that student variables are not typically related to student evaluations of their instructors. These students variables include: age (Centra, 1993); gender (Feldman, 1997); level
(McKeachie, 1979); GPA (Feldman, 1976); and personality (Abrami, Perry, & Leventhal, 1982). However when some of these same variables are examined in relation to a survey of teaching excellence, these variables seem to be related to students’ responses.

In summary, five of the six demographic factors appeared to have a significant relationship with how students respond to certain survey items. $R^2$’s ranged from .010 (Instructor Enthusiasm and Individual Rapport) to .034 (Learning). Analysis of the 12 dimensions revealed that only demographic factor Employment failed to have any significant influence on how students responded to survey items. Semester Hours completed was found to have a significant influence on the Breadth dimension only. The demographic variables of Age, Gender, Ethnicity, and Reason for Attendance on the other hand, appear to have a statistically significant (although not a large practical significance) influence on how students responded to several of the 12 dimensions. These findings are similar to the prior research that revealed that the variables of age of student (Centra, 1993) and gender of the student (Feldman, 1997) were related to student responses on course evaluation forms.

The most prominent predictor variable Gender appeared related to eight of the twelve dimensions. Mean ratings provided by female participants were significantly higher than their male counterparts on eight dimensions (Learning, Clarity, Rapport, Group, Assignment, Examination, Diversity, and Active Learning). Females tend to view teaching excellence in a different way than their male counterparts in all eight of the aforementioned dimensions. Females had the tendency to endorse these eight dimensions more strongly in their relationship to teaching excellence than did males. However, the effect sizes were small in the analysis of all eight dimensions in which significant
differences were found. While the results were statistically significant, the practical significance of the results is minimal at best.

Age was the second most prominent predictor variable with seven of the twelve dimensions. Follow-up Scheffe tests revealed significant differences between age group 1 (ages 17 to 21) and group 3 (ages 28 to 33) in dimensions Learning and Clarity. With these two dimensions there was a trend suggesting that as the age of the student increased, they found the items in the Learning and Clarity as more relevant to teaching excellence. However, the effect sizes were small in the analysis of both dimensions where significant differences were found. While the results were statistically significant, the practical significance of the results is minimal at best. With four other dimensions (Assignment, Technology, Diversity, Ethics, and Active Learning), an initial statistical analysis suggested that Age was a relevant predictor variable. Follow-up Scheffe analysis did not reveal any significant differences between the different age groups.

Ethnicity was found to be a predictor variable on the Learning, Enthusiasm, Clarity, Group, Breadth of Coverage, Technology and Active Learning dimensions. Follow-up analysis revealed significant differences in Ethnic backgrounds when it comes to these seven factors. In the dimension Learning, significant differences were found between group 4 (Native Americans) and the reference group of Caucasian with a mean difference of .46 ($p < .05$). In reviewing the overall descriptive statistics, students in group 4 (Native American) had the lowest mean among the groups while students in the Caucasian group had the third highest mean. The results suggest that the Hispanic, African American, and the Caucasian groups rated items from the Learning dimension, higher in terms of their relevance to teaching excellence, than did students in group 4.
(Native Americans). While the results were statistically significant, ethnicity only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

In the Enthusiasm dimension, significant difference were found between students that identified themselves as Other and those students in the Caucasian reference groups. Students identifying themselves as Other rated items from the Instructor Enthusiasm dimension higher in it relationship to teaching excellence than did the students from the Caucasian group.

An analysis of the African American (Ethnicity) and Hispanic (Ethnicity) predictor factors was undertaken to investigate how students’ ethnicity related to significant differences on student responses to the Clarity dimension. Significant differences were found between both African American and Hispanic and the reference group of Caucasian. The results suggest that African American and Hispanic students rated items from the Organization/Clarity dimension higher in terms of their relevance to teaching excellence, than did students classified as Caucasian. While the results were statistically significant, Ethnicity only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

In relation to the Group dimension, significant differences on student responses were found between African Americans (Ethnicity) and the Caucasian reference group. The results suggest that African American students rated items from the Group dimension higher in terms of their relevance to teaching excellence, than did students classified as Caucasian. While the results were statistically significant, Ethnicity only accounted for a
small portion of the total variance and the practical significance of the results is minimal at best.

An analysis of the Breadth of Coverage revealed significant difference were found between both African American and Other groups and the reference group of Caucasian. The results suggest that African American and Other students rated items from the Breadth dimension higher in terms of their relevance to teaching excellence, than did students classified as Caucasian. While the results were statistically significant, Ethnicity only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

In relation to the Technology dimension, the data revealed significant difference between both the African American and Other groups and the reference group of Caucasian. The results suggest that African American and Other students rated items from the Breadth dimension higher in terms of their relevance to teaching excellence, than did students classified as Caucasian. While the results were statistically significant, Ethnicity only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

An analysis of the Hispanic and Other predictor factors was conducted to investigate how students’ ethnicity related to significant differences on student responses to the Active Learning dimension. Significant differences were found between both Hispanic and Other and the reference group of Caucasian when it came to the Active Learning dimension. The results suggest that Hispanic student and students classified as Other rated items from the Active Learning dimension higher in terms of their relevance to teaching excellence, than did students classified as Caucasian. While the results were
statistically significant, Ethnicity only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

Reason for Attendance was a predictor only with the Breadth of Coverage Ethics dimensions. While the multiple regression equation was significant for Reason for Attendance, significance differences were not found between the groups in the predictor factor in relation to the Ethnicity dimension.

An analysis of the Certificate (Reason for Attendance) predictor factor was undertaken to investigate how the subjects’ reason for attendance related to significant differences on student responses to the Breadth of Coverage and the Ethics/Integrity dimensions. Significant differences were found between Certificate and the reference group of Continue to Four-year students. The results suggest that Four year, AA Terminal and Upgrade students rated items from the Breadth of Coverage and the Ethics/Integrity dimension higher in terms of their relevance to teaching excellence, than did students classified as Certificate reason. While the results were statistically significant, Reason only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

Finally, Semester Hours was found to be a predictor factor for the Breadth of Coverage dimension. Significant differences were found between age groups 1 (less than 12 hours) and 4 (37 to 48 hours). The results appears to suggest that the perception of the importance of the dimension Breadth of Coverage related to overall teaching excellence is higher in students who have completed more than 12 semester hours versus students who have completed less than 12 semester hours of college work. While the
results were statistically significant, Semester Hours only accounted for a small portion of the total variance and the practical significance of the results is minimal at best.

As stated previously, certain demographic factors (e.g., Age, Gender, Ethnicity Reason for Attendance, and Semester Hours) tend to play a role in how students view teaching excellence. However, effect sizes were small, so the practical significance is minimal at best. An instructor in the classroom today may want to evaluate the composition of their classes and possibly modify the organization and procedures in the classroom accordingly. For example, older students appear to have different expectations about learning and how they perceive excellence in teaching. While many community college classrooms are mixed demographically, there are those occasions when a specific demographic group is heavily represented in a specific course section (e.g., adults in an evening class). Instructors, who understand how demographic factors play a role in learning and perceptions of excellence, can modify their teaching styles to better accommodate their students. This flexibility in style is reflective of teaching excellence. Further, specialized workshops could be developed to help instructors better understand how community college student view teaching excellence and help instructors refine their skills. As previously stated at the beginning of this chapter, today’s educational system can no longer afford to offer courses that fail to meet students’ expectations and needs. Community colleges and universities no longer have a large and growing captive audience. In our mobile and technologically advanced society, students can pick up and leave an institution if they perceive that something better can be found at another institution. With so many educational choices available today, students who are not satisfied by one educational outlet can quickly find another institution to gratify them.
educationally and personally. Faculty members need to understand these facts and be willing to make modifications to keep the consumer (the students) satisfied. Findings from this study suggest that there are certain factors that influence their perceptions of teaching excellence. Of course more research needs to be conducted in this area of investigation, but institutions should take notice of what students are saying in surveys similar to the one utilized in this study.

The findings addressed in this section should be examined carefully by instructors seeking to become excellent teachers. Students are identifying for us those traits that they feel are most and least important to teaching excellence. Individual instructors and faculty preparation programs would be wise to incorporate some of the findings of this study and other previous studies to encourage teaching excellence. However, the results of the multiple regression analyses should not be over emphasized. Although significant differences were discovered in the analyses, the practical significance of the results is minimal at best.

Limitations of the Study

There are several potential limitations to the current study. These include limitations related to the use of student perceptions, the sample and the instrument.

One potential limitation of the current study relates to the use of student perceptions as a tool to assess and describe teaching excellence. Some might suggest that undergraduate students have relatively unsophisticated views of teaching excellence when compared to the views of faculty, faculty development professionals, or educational researchers. Use of student input provides only one source of information when many other sources exist. Students may not always be the best judge of teaching excellence
when it comes to the content and meaning of some survey items. Thus, a parallel investigation might be conducted in the future to systematically assess the perception of faculty or faculty development professionals.

A second limitation of the current study involves the sample that was used. The study was conducted with a large sample of students enrolled at one community college in Florida. These students, faculty and courses might differ in some ways from college and university students, faculty and courses elsewhere. If so, these differences might influence how the present results should be interpreted. The study did not employ the use of random sampling of the institution’s total student body and depended upon nested data (i.e., students found in intact classes). Therefore, a lack of independence resulted through the use of the sample. Additionally, the sample used and the design of the study did not allow direct comparisons of community college and university students with regard to their perceptions of teaching excellence. Therefore, it is difficult to say with any degree of certainty that community college or university students are either similar or dissimilar in their perceptions of teaching excellence. Although, the author of the current study has made an effort to compare previous research results with those obtained by the current study, it is impossible to make a true comparison of these two populations without directly measuring both populations with the same instrument. Any assertions made by the author of the current study are best viewed as conjecture informed by prior research and the findings of this study. A future study utilizing both community college and university students measured by the same instrument is recommended to determine if any statistical differences exist in the perceptions of teaching excellence among and between these groups.
The use of a questionnaire was the third limitation in this study. The use of this technique allowed participants the opportunity to only rate factors included on this instrument. It did not allow participants to explore or identify other elements of teaching excellence. If the original SEEQ instrument included additional questions related to the course or instructors, the results might be influenced. With the use of a modified version (questions related to diversity, ethics/integrity, technology, and active learning added for the study) of the SEEQ that has been widely tested empirically (e.g., Marsh, 1982a, 1982b, 1984, 1987), it was hoped that any concern about the questionnaire as a limitation would be minimized. However, it is impossible to truly determine whether this limitation was eliminated in the current research. A survey with open-ended questions might serve to eliminate some of the concerns related to a forced choice type of survey. However, the use of an open-ended survey was beyond the scope of the current research as it was developed using the SEEQ instrument as a guide. The SEEQ is a forced choice instrument and modification of the instrument would have been cumbersome and would have brought to light a number of validity and reliability issues that would have required a major test construction effort that was beyond the scope of the current study.

Implications for Community College Instructors

As previously stated, both the student-centered and/or learning-centered college orientations strive to offer courses that are academically beneficial and worthwhile to students. Recently, renewed attention has also been placed on evaluating and assessing faculty effectiveness and teaching excellence. An understanding of how and what students perceive as most central to teaching excellence has far reaching effects in both the research arena as well as for classroom instruction. The current study highlighted
several results that are important to understanding student perceptions and have implications for instructional and institutional practice.

Study participants ranked the Examination dimension as the most important to teaching excellence. In fact, three examination items were ranked in the top 15 responses. Students want their instructors to use evaluation methods that are fair and appropriate. They expect to receive valuable feedback on evaluations and graded materials. As a follow-up to this question, the researcher heard from many students that valuable feedback is more than just a grade or a notation of what they did wrong. Students would like constructive feedback that allows them to learn as well as reduce or eliminate future mistakes. Finally, students want exams and graded materials that test the course content emphasized by the instructor. Many times exams and other graded materials do not test what has been taught in class, but instead emphasize the textbook or some other source that was superficially addressed by the instructor. These three areas identified by students in the current research should be incorporated into examinations and other course assignments as they are being designed and developed.

One of the major findings of this study was the importance that students place on diversity issues when describing teaching excellence. Previous studies have not adequately addressed this issue and its relevance to teaching excellence. The Diversity dimension was the second highest rated dimension by study participants. Students rated items related to diversity as two out of the highest three items; three out of four diversity items appear among the top 15 responses. It is apparent that students in this study placed importance on diversity and want their instructors to also be mindful of such diversity issues. Until the last decade or so, teacher education programs did not place a strong
emphasis on diversity issues in the classroom. The finding that students placed considerable importance on diversity when describing teaching excellence makes it clear that teacher education needs to include instruction on the importance of diversity issues in the classroom. Additionally, instructors should be attentive to the importance of diversity in their classrooms. Students want their instructors to be fair and unbiased in their treatment of all students. Students want instructors to demonstrate respect for all students. Study participants stated that they want instructors who encourage mutual respect among students of diverse backgrounds. Finally, students ranked as moderately important the idea that instructors should encourage discussions of diversity issues when appropriate to course content. As the United States population becomes more and more diverse, this issue will continue to be a relatively important issue in the classroom.

The third highest ranked dimension was Instructor Enthusiasm. Three of the items from this dimension were among the top 15 items ranked by the study participants. The student rankings suggest that they want instructors who are enthusiastic about the courses that they teach. They like instructors who have a presentation style that holds their interest during class time. Students also feel that it is important for instructors to be dynamic and energetic. In terms of designing an excellent learning environment, it makes sense that students would rank these three items as especially important. Most faculty members, when remembering their own undergraduate, years can recall the differences in learning and enjoyment of instructors who possessed the above traits versus instructors who did not. Instructors who possess enthusiasm are normally the ones remembered fondly, while others not possessing this trait are commonly forgotten.
The Learning/Value dimension was ranked fourth among the 12 survey dimensions. Two of the items that comprise this dimension were ranked in the top 15 items that students relate to teaching excellence. Study participants felt that not only should they be able to learn and understand materials in a course, but what they learn should be valuable. Simply put, students want to learn relevant and valuable information. They want to learn material that is valuable to them not only in the classroom but also in other aspects of their lives.

Among the top fifteen highest ranked items, were two items from the Organization/Clarity dimension. The dimension ranked fifth overall among the 12 dimensions. Students reported wanting course materials to be well prepared and carefully explained. Additionally, participants ranked the item “the instructor’s explanations are clear” as second among all survey items. Too often, students are not clear about what instructors want simply because course materials are not well prepared or are not explained properly. Instructors aware of this issue consequently devote extra time to ensuring that students clearly understand what is expected of them.

The Individual Rapport dimension, with only one item in the top 15 items, ranked sixth in terms of overall ratings. Among the top ranked items, students felt that it is important for instructors to make them feel welcome in seeking help/advice outside the classroom. While many instructors have office hours, students are not always advised that they are welcome to stop in to talk. Some instructors actually make it difficult for students to find them when they are not in the classroom. Students want instructors to be available to ask questions and deal with problematic situations outside the classroom.
environment. Students’ perceptions of teaching excellence are influenced by how much instructors make themselves available to their students.

Although, ranked seventh among the dimensions, the survey results suggest that when describing teaching excellence students are concerned about Ethics/Integrity issues in and outside the classroom. Participants rated two ethics/integrity items among the top 20 survey items. Students admire instructors who model high professional and ethical standards with students. Additionally, students want instructors to take appropriate steps to prevent or detect cheating. Parenthetically, it might be noted that after completing the survey, several students mentioned to this investigator that they were upset by the fact that other students do cheat and the fact that while they work hard for their grade, cheaters do not. Such students want their instructors to take steps to limit and/or eliminate cheating in their classrooms.

Among the lowest ranked items were items from the Active Learning and Technology dimensions. As a matter of fact, the three lowest ranked items were from the Technology dimension. It is my belief that some faculty believe that by utilizing technology tools such as PowerPoint, they are demonstrating teaching excellence in the classroom. From the results of the current study, it appears that technology is only moderately important to students’ perceptions of teaching excellence. Technology is only one of many tools that instructors can use in the classroom. While it can enhance the learning environment, it should not be an overused or ineffectively used tool. The poor use of the current technology can contribute to students having a negative learning experience. These students are more likely to rate technology low as a factor related to teaching excellence. Some tried and true instructional skills and instructor traits were
ranked higher in their relationship to teaching excellence than were technology items. Among the top 15 items ranked by students in the current study, there were multiple items from the Instructor Enthusiasm, Evaluation, and Organization dimensions. Therefore, to be considered an excellent instructor, instructors need to use a full arsenal of tools and skills rather than relying heavily on technology.

Community college students ranked Active Learning among the lowest ranked dimensions. One Active Learning item did appear in the top 20 ranked items. The item was “the instructor uses alternative approaches to traditional lectures during class sessions.” Two other Active Learning items (i.e., “the instructor uses various forms of writing assignments to enhance learning” and “the instructor has students work with partners or in groups to enhance learning”) were ranked among the lowest 6 items on the instrument. This is an interesting finding. On one hand students reported that the use of alternative approaches were of great importance to teaching excellence, but these same students felt that two of the Active Learning items that describe alternative approaches were only moderately important to teaching excellence. This becomes a challenge to the instructor to find a unique balance between these two opinions of students. It appears that students may be saying that teaching excellence involves the use of discussion type lectures (which are suggested by the fact that students like instructors who welcome questions and discussion) rather than traditional lectures and group work.

Additionally, as discussed previously, several demographic factors (e.g., Age, Gender, Ethnicity, Reason for Attendance and Semester Hours completed) played a role in how students view teaching excellence. Although, these factors were found to be statistically significant predictors of dimensions, effect sizes were small. Therefore, the
practical significance of the results is small at best. An instructor today may want to evaluate the make up of their classes in terms of classroom procedures and modify the organization and procedures in the classroom accordingly. It is obvious that older students have different expectations in learning and how they perceive excellence in teaching. While many community college classrooms are mixed demographically, there are those occasions when a specific demographic make up is apparent. Instructors, who understand how demographic factors play a role in learning and perceptions of excellence, can modify their teaching styles to accommodate the students they have. This flexibility in style is reflective of teaching excellence. Specialized workshops should be developed to help instructors to understand how community college student view teaching excellence and allow them to practice skills that will enhance their teaching abilities. Of course, there will always be the instructor who says “this is the way I have always done things, so there is no need to change my ways.”

The finding addressed in this section should be examined carefully by instructors who wish to become excellent teachers. Students are telling us what traits that they feel are important and not important as they relate to teaching excellence. Individual instructors and teacher preparation programs would be wise to incorporate some of the findings of this study and other previous studies to encourage teaching excellence. On a personal note, since reviewing the results of this study, I have become more cognizant of diversity, technology, active learning and other issues in my classroom. By being cognizant of these issues, I find myself modifying my classroom environment to incorporate more of the factors that students reported are important to teaching excellence. Through the knowledge of these results, I feel that I am striving to be a better
instructor. I believe that if other instructors would take note of these results and incorporate them into their thinking and structure of the classroom environment, teaching excellence might be perceived by students in more classrooms.

Implications for Faculty Development

There are several implications from this study that might influence faculty development efforts. First, universities that train instructors for community college teaching would be well advised to explore students’ perceptions of teaching excellence. Additionally, community colleges that employ teachers and instructors might incorporate the findings of this study into their faculty development and continuing education programs. As stated previously, excellent instructors must find that perfect balance of lecture, evaluation methods, technology, diversity and ethics that enrich their classroom environment. It is my opinion, that some of today’s students expect to be entertained as well as enlightened. They want to be semi-active in the learning process. They expect ethics and integrity to be modeled in the classroom. As our students become more diverse, they expect to be treated with respect and in a similar manner to everyone else in the classroom. But, students also expect to be treated as individuals whose ideas and opinions are welcomed and evaluated. They expect tests to be fair and measure what they have learned in class. Students expect instructors to be clear, concise, and digress as little as possible. If technology is used it should be used appropriately and as a supplement to other teaching modalities. Faculty development efforts need to address such concerns and listen to what students are saying. Taking into account some of the lessons learned in these results and incorporating them into our faculty development effort could pay big dividends. The findings of the current study are similar to prior
research findings (e.g., Barr & Tagg, 1995; Felder & Brent, 1996; Kolb, 1984; Thornberg, 1995) related to both the student-centered and the learning-centered orientations. Many of the newly trained instructors (who have been students of the late 20th century and the early 21st century) will understand the importance of being flexible and the importance of creating a supportive learning environment. These are lessons that can be learned from this study as well as a number of past studies that have examined how students assess teaching effectiveness as well as teaching excellence.

Implications for Further Research

The emergence of student-centered and the learning-centered orientations in higher education (e.g., Barr & Tagg, 1995; Felder & Brent, 1996; Kolb, 1984; Thornberg, 1995) has stimulated a great deal of interest in learning more about how students learn as well as how students view their courses and their instructors. Both student-centered and learning-centered orientations strive to present courses that are academically beneficial to students. Recently, renewed attention has also been placed on evaluating and assessing faculty effectiveness and teaching excellence. As mentioned previously, the literature is full of research studies of university students’ views of courses and instructors. However, there is a limited amount of research on university college students’ views of teaching excellence. Research investigating community college students’ views of teaching excellence is almost nonexistent.

The current study, therefore, assessed community college students’ views of teaching excellence. The current study was however limited in its scope and did not address several important issues. From the discussion of the current findings, it appears that community college students view some aspects of teaching excellence differently.
from their university counterparts. It would be interesting to discover if clear and compelling differences exist between these two populations. Secondly, this study is based on data from only one community college, so it is difficult to say that the results can automatically be generalized to all community college students. One also, should wonder if similar findings would be obtained from different community colleges with different demographic characteristics. Third, do perceptions of teaching excellence change over time (with age or the numbers of semester hours completed)? This is not something that was addressed directly in the current research study. Lastly, future research might want to include a more open-ended qualitative approach the research questions asked in this study. These four issues have implications for future research efforts in this area of interest.

Future research efforts might focus on a direct comparison of community college and university students utilizing the same survey form. Assumptions were made in the present investigation about these two populations based on a review of past research and an analysis of the present data. To address these assumptions empirically, a sample of students from several universities and several community colleges could be collected and a direct comparison of perceptions of teaching excellence could easily be made. From this type of research design, it would be possible to determine if community college students differ from their university counterparts related to their perceptions of teaching excellence.

Future research efforts should also focus on learning more about community college students’ perceptions of teaching excellence. One of the limitations of the current study is the fact that only one community college was used in the sample. Future
investigations might include multiple institutions that would truly represent a cross-section of community college students. Would the resulting data from institutions with different demographic characteristics from the community college in this study, resemble the data reported here? This is an important question that could be answered if data from multiple institutions was collected. Future researchers may wish to include other demographic variables (e.g., occupation, socioeconomic level, major, part-time versus full-time student) to determine if any other demographic factors influence how students respond to the survey items.

Additionally, there is the issue of whether perceptions of teaching excellence change over time. The regression analysis in the current study suggested that both the age of the student and the number of semester hours completed were related to how students responded to particular survey items. Data in the current study took place over one semester. A future longitudinal study might reveal whether perceived differences in teaching excellence change over time.

If researchers are interested in the factor model of the perceptions of teaching excellence, future research needs to address how the structural factor model would appear when assessing perceptions of teaching excellence over time. The data collected in the confirmatory factor analysis supported the idea that both the eight dimensional model and the twelve dimensional model of teaching achieved marginal to reasonable goodness of fit. Numerous modifications to the model were suggested by the data modification indices (MI) to improve the goodness of fit. It was beyond the scope of the current study to address these indices and include them in a new proposed model and then test it for goodness of fit. Additional research using Confirmatory Factor Analysis (CFA) is
needed to determine the structural factor model of perception of teaching excellence with the best fit. Determining the model with best fit would allow a better understanding of how different factors affect students’ perceptions of teaching excellence. As a future research effort, it would be interesting to give community college students the current survey with the directions/instructions from the SEEQ. The instructions would tell students to use the current survey form to evaluate their course and instructor rather than which factors relate to teaching excellence. Would the factor structure of the current survey with the SEEQ instructions be similar to the SEEQ factor structure found by Marsh with university students or would it continue to differ greatly? This would be one way to evaluate the influence of instrument directions on the overall factor structure.

Finally, there is a question as to whether future research should involve the use of an open-ended questionnaire rather than the structured questionnaire approach used in this study. It is interesting to note that there was little variability among the items on the questionnaire. This is due to the fact that all items are indicators of teaching excellence. Did the structured questionnaire with its forced choice answers narrow the variability among the responses? Did the structured questionnaire not allow students to state their true opinions about teaching excellence? Would the resulting data be different if open-ended questions were on the questionnaire? While the structured questions were easy to analysis and easy to compare against Marsh’s original results found on the SEEQ, one has to wonder whether the structured format was also a limitation. Future investigators might wish to consider an open-ended qualitative form that would allow students to free voice their opinions and their perceptions of teaching excellence. This type of questionnaire might increase the variability among items and allow for a much clearer
assessment of those traits are most important to teaching excellence.

Implications for Designers of Student Rating Forms

One major conclusion that can be drawn from the results of the current study is the fact that the four new dimensions (diversity, ethics/integrity, active learning and technology) and related items should be included in the development of new student rating forms for teaching effectiveness and excellence. During the literature review for this study, the author discovered that many widely used instruments today (including the SEEQ) were developed initially in the 1970’s and 1980’s. For the most part these instruments did not include dimensions examining the impact of diversity, ethics/integrity, active learning, and technology on perceptions of teaching effectiveness and excellence. These factors (dimensions) were not seen as relevant or important at the time of the development of these older student rating forms. In our society, diversity issues have only recently become considered relevant and important to the educational process. The results of the current study suggest that students consider diversity issues as important to their perception of teaching excellence. For that reason any newly developed student rating forms either for evaluating teaching excellence or for course evaluation should include items related to diversity.

While Ethics/Integrity has been a concern in the educational process for many years, there has been a renewed concern about this issue in recent years. As previously noted, several research studies have suggested that students are increasingly involved in cheating and other forms of academic dishonesty. The results of the current study suggest that students are very concerned about Ethics/Integrity issues and believe that dealing with these issues is important. Participants in the current study suggest that
ethics/integrity issues are related to students’ perceptions of teaching excellence. Therefore, it is suggested that designers of future student rating forms include items related to Ethics/Integrity in their instruments.

Although the Active Learning and Technology dimensions were not ranked high in the current survey, both these issues have become increasingly important in college teaching today. Previous research results have suggested that students prefer active learning activities to traditional lecture based teaching. Participants, in the current study, ranked active learning items as moderately important in its relationship to teaching excellence. Future surveys should include active learning items. Technology has becoming increasingly important to the delivery of educational materials. Classrooms are equipped with computers, projectors, and the capability of accessing the World Wide Web. Students have become accustomed to using computers throughout their educational careers. Although technology items were only seen as moderately important to perceptions of teaching excellence, anecdotal evidence suggests that technology related issues are important to students. Therefore, future student rating surveys should be designed with the inclusion of technology items considered by developers.

Significance of the Study

Through knowledge of how students view courses and perceive teaching excellence, instructors and administrators at community colleges can get a clearer picture as to what students believe contributes most to course/instructor quality. Additionally, instructors can identify specific ways to modify and improve their own courses accordingly. Currently, many colleges use locally developed or home-grown course evaluation instruments that do not provide faculty with clear information about student
attitudes and perceptions that can contribute to future curricular development and/or instructional improvement. Findings based upon the questionnaire employed in this study have provided some new insights into community college students’ perceptions of teaching excellence. The findings may be helpful in aiding in the development of new courses or improving existing courses. Although the questionnaire used in this study had previously been used with university students, this instrument had not been previously used in a large-scale study of community college students. As the literature review presented in Chapter Two revealed, a limited number of studies have been conducted to investigate the relationship between student course ratings and what students believe contribute most to their sense of teaching excellence. The current investigation expanded the knowledge of students' perceptions of teaching excellence, especially the perceptions of community college students. Knowledge about what traits community college students associate with teaching excellence give some insight into a research topic on which the surface has been barely scratched. It is hoped this study will stimulate further research in the area of teaching excellence, especially in the community college setting.
References


Appendices
Appendix A: A Listing of Dimensions and Related Items

*Dimension 1 - Learning/Value*

1. You find the course intellectually challenging and stimulating.
2. You learn something in the course, which you consider valuable.
3. Your interest in the subject increase as a consequence of the course.
4. You are able to learn and understand the subject materials in the course.

*Dimension 2 – Instructor Enthusiasm*

5. The instructor is enthusiastic about teaching the course
6. The instructor is dynamic and energetic in conducting the course
7. The instructor enhances presentations with the use of humor
8. The instructor's style of presentation holds your interest during class.

*Dimension 3 – Organization/Clarity*

9. The instructor's explanations are clear.
10. The course materials are well prepared and carefully explained
11. The proposed course objectives agree with those actually taught so you know where the course is going.
12. The instructor gives lectures that facilitate note taking.

*Dimension 4 – Individual Rapport*

13. The instructor is friendly toward individual students
14. The instructor makes students feel welcome in seeking help/advice outside the classroom.
15. The instructor has a genuine interest in individual students.
16. The instructor is adequately accessible to students during office hours or after class.
Dimension 5 - Group Interaction

17. Students are encouraged to participate in class discussions.

18. Students are invited to share their ideas and knowledge.

19. Students are encouraged to ask questions and are given meaningful answers.

20. Students are encouraged to express their own ideas and/or question the instructor.

Dimension 6 - Breadth of Coverage

21. The instructor contrasts the implications of various theories.

22. The instructor presents the background or origin of ideas/concepts developed in class.

23. The instructor presents points of view other than his/her own when appropriate.

24. The instructor adequately discusses current developments in the field.

Dimension 7 - Assignments/Readings

25. The required readings/text for the course are valuable.

26. The class readings, homework, and assignments contribute to an appreciation and understanding of the subject.

Dimension 8 - Examinations

27. Feedback on evaluations/graded materials is valuable.

28. The methods for evaluating student work are fair and appropriate.

29. Exams/graded materials test the course content as emphasized by the instructor.

Dimension 9 - Technology

30. The instructor uses technology appropriately in the classroom.

31. The technology used in the course supports the goals of the class.
32. Electronic communications (e.g., email, WebCT) is used to promote interaction and discussion.

33. Instructional resources on the World Wide Web are used to promote student learning.

34. The course helps me develop and refine my skills in using technology.

*Dimension 10 - Diversity*

35. The instructor encourages mutual respect among students of diverse backgrounds.

36. The instructor is fair and unbiased in his/her treatment of all students.

37. The instructor encourages discussion of diversity issues when appropriate to course content.

38. The instructor demonstrates respect for all students (e.g., not demeaning to either individuals or subgroups).

*Dimension 11 – Ethics/Integrity*

39. The instructor takes appropriate steps to prevent or detect cheating.

40. The instructor helps students develop their understanding of moral and ethical issues related to course content.

41. The instructor related standards for ethical and professional behavior to course content.

42. The instructor models high professional and ethical standards with students.

*Dimension 12 – Active Learning*

43. The instructor uses alternative approaches to traditional lectures during class sessions.

44. The instructor uses various forms of writing activities to enhance learning.

45. The instructor has students work with partners or in groups to enhance learning.

*Demographic Items*

Please complete the following demographic items and mark your responses on the optical scan form:
46. Age:  (A) 15-21  (B) 22-30  (C) 31-39  (D) 40-over

47. Gender: (A) Female  (B) Male

48. Ethnic background:  (A) African American  (B) Caucasian  (C) Hispanic  (D) Native American  (E) Other

49. Prior to this course I have completed ______ semester hours of college level course work (Please DO NOT include hours earned through high school dual enrollment or advanced placement.

a) Less than 12 hours  b) 13-24 hours  c) 25-36 hours  d) 37-48 hours  e) 49 hours or more

50. Primary reason for attending PHCC. Mark the answer that best fits your situation.

(A) I plan to earn an AA or AS degree but currently have no plans to continue on to a four-year institution.
(B) I plan to earn an AA or AS degree and plan to continue on to a four-year institution.
(C) I am taking community college course for personal interests.
(D) I plan to complete a certificate program
(E) I am currently seeking an employment upgrade or am retooling for a new career, but don’t intend to complete a degree or certificate.
(F) I am a university student taking one or more community college classes.

51. Employment (hours per week): (A) 0 hours  (B) 1-10 hours  (C) 11-20 hours  
(D) 21-30 hours  (E) 30-40+ hours
Appendix B: Original Proposed Survey of Teaching Excellence

SURVEY
On the following 52 survey items, please rate each statement in terms of its relative importance to teaching excellence. We are asking you to think in general about instructors and courses and not about evaluating your current instructor. Please mark your responses on the optical scan sheet provided to you.

Items should be rated using the following five-point scale:

A) OF NO IMPORTANCE TO TEACHING EXCELLENCE
B) OF LITTLE IMPORTANCE TO TEACHING EXCELLENCE
C) OF MODERATE IMPORTANCE TO TEACHING EXCELLENCE
D) OF GREAT IMPORTANCE TO TEACHING EXCELLENCE
E) OF CRITICAL IMPORTANCE TO TEACHING EXCELLENCE

1. You find the course intellectually challenging and stimulating. (A) (B) (C) (D) (E)
2. You learn something in the course, which you consider valuable. (A) (B) (C) (D) (E)
3. Your interest in the subject increase as a consequence of the course. (A) (B) (C) (D) (E)
4. You are able to learn and understand the subject materials in the course. (A) (B) (C) (D) (E)
5. The instructor is enthusiastic about teaching the course. (A) (B) (C) (D) (E)
6. The instructor is dynamic and energetic in conducting the course. (A) (B) (C) (D) (E)
7. The instructor enhances presentations with the use of humor. (A) (B) (C) (D) (E)
8. The instructor's style of presentation holds your interest during class. (A) (B) (C) (D) (E)
9. The instructor's explanations are clear. (A) (B) (C) (D) (E)
10. The course materials are well prepared and carefully explained. (A) (B) (C) (D) (E)
11. The proposed course objectives agree with those actually taught so you know where the course is going. (A) (B) (C) (D) (E)
12. The instructor gives lectures that facilitate note taking. (A) (B) (C) (D) (E)
RESPONSES

A) OF NO IMPORTANCE TO TEACHING EXCELLENCE
B) OF LITTLE IMPORTANCE TO TEACHING EXCELLENCE
C) OF MODERATE IMPORTANCE TO TEACHING EXCELLENCE
D) OF GREAT IMPORTANCE TO TEACHING EXCELLENCE
E) OF CRITICAL IMPORTANCE TO TEACHING EXCELLENCE

13. The instructor is friendly toward individual students.  (A) (B) (C) (D) (E)

14. The instructor makes students feel welcome in seeking help/advice outside the classroom.  (A) (B) (C) (D) (E)

15. The instructor has a genuine interest in individual students.  (A) (B) (C) (D) (E)

16. The instructor is adequately accessible to students during office hours or after class.  (A) (B) (C) (D) (E)

17. Students are encouraged to participate in class discussions.  (A) (B) (C) (D) (E)

18. Students are invited to share their ideas and knowledge.  (A) (B) (C) (D) (E)

19. Students are encouraged to ask questions and are given meaningful answers.  (A) (B) (C) (D) (E)

20. Students are encouraged to express their own ideas and/or question the instructor.  (A) (B) (C) (D) (E)

21. The instructor contrasts the implications of various theories.  (A) (B) (C) (D) (E)

22. The instructor presents the background or origin of ideas/concepts developed in class.  (A) (B) (C) (D) (E)

23. The instructor presents points of view other than his/her own when appropriate.  (A) (B) (C) (D) (E)

24. The instructor adequately discusses current developments in the field.  (A) (B) (C) (D) (E)

25. The required readings/text for the course are valuable  (A) (B) (C) (D) (E)

26. The class readings, homework, and assignments contribute to an appreciation and understanding of the subject.  (A) (B) (C) (D) (E)
27. Feedback on evaluations/graded materials is valuable.  
   (A) (B) (C) (D) (E)  

RESPONSES  
A) OF NO IMPORTANCE TO TEACHING EXCELLENCE  
B) OF LITTLE IMPORTANCE TO TEACHING EXCELLENCE  
C) OF MODERATE IMPORTANCE TO TEACHING EXCELLENCE  
D) OF GREAT IMPORTANCE TO TEACHING EXCELLENCE  
E) OF CRITICAL IMPORTANCE TO TEACHING EXCELLENCE  

28. The methods for evaluating student work are fair and appropriate.  
   (A) (B) (C) (D) (E)  

29. Exams/graded materials test the course content as emphasized by the instructor.  
   (A) (B) (C) (D) (E)  

30. The instructor uses technology appropriately in the classroom.  
   (A) (B) (C) (D) (E)  

31. The technology used in the course supports the goals of the class.  
   (A) (B) (C) (D) (E)  

32. Electronic communications (e.g., email, WebCt) is used to promote interaction and discussion.  
   (A) (B) (C) (D) (E)  

33. Instructional resources on the World Wide Web are used to promote student learning.  
   (A) (B) (C) (D) (E)  

34. The course helps me develop and refine my skills in using technology.  
   (A) (B) (C) (D) (E)  

35. The instructor encourages mutual respect among students of diverse backgrounds.  
   (A) (B) (C) (D) (E)  

36. The instructor is fair and unbiased in his/her treatment of all students.  
   (A) (B) (C) (D) (E)  

37. The instructor encourages discussion of diversity issues when appropriate to course content.  
   (A) (B) (C) (D) (E)  

38. The instructor demonstrates respect for all students (e.g., not demeaning to either individuals or subgroups).  
   (A) (B) (C) (D) (E)
39. The instructor takes appropriate steps to prevent or detect cheating
   (A) (B) (C) (D) (E)

40. The instructor helps students develop their understanding of moral and ethical issues related to course content.
   (A) (B) (C) (D) (E)

41. The instructor related standards for ethical behavior to course content.
   (A) (B) (C) (D) (E)

42. The instructor models high and ethical standards with students.
   (A) (B) (C) (D) (E)

43. The instructor uses alternative approaches to traditional lectures during class sessions.
   (A) (B) (C) (D) (E)

44. The instructor uses various forms of writing activities to enhance learning
   (A) (B) (C) (D) (E)

45. The instructor has students work with partners or in groups to enhance learning.
   (A) (B) (C) (D) (E)

Please complete the following demographic items and mark your responses on the optical scan form:

46. Age: (A) 15-21 (B) 22-30 (C) 31-39 (D) 40-over

47. Gender: (A) Female (B) Male

48. Ethnic background: (A) African American (B) Caucasian (C) Hispanic (D) Native American (E) Other

49. Prior to this course I have completed ______ semester hours of college level course work (Please DO NOT include hours earned through high school dual enrollment or advanced placement.

   A) Less than 12 hours  B) 13-24 hours  C) 25-36 hours  D) 37-48 hours  E) 49 hours or more

50. Primary reason for attending PHCC.

   A) To earn an AA degree  B) To earn an AS degree  C) For personal interests  D) To complete a certificate program  E) To transfer to a four-year institution
51. Are you:

A) Seeking an employment upgrade/retooling
B) A university student taking one or more community college classes

52. Employment (hours per week): (A) 0 hours (B) 1-10 hours (C) 11-20 hours
     (D) 21-30 hours (E) 30-40+ hours

Thank you for your participation.
Appendix C: Final Survey Booklet

Title of Study: Teaching Excellence: Perceptions of Community College Students

Principle Investigator: Gary R. Oesch, M.A. - Doctoral Student at the University of South Florida

Study Locations(s): Community College.
As a student enrolled in one of Florida's public community colleges, we are inviting you to participate in this voluntary piece of important educational research.

General Information about the Research Study: The primary purpose of this study is to explore students' perceptions of teaching excellence in the community college setting. In particular, we hope to identify those factors/components that students view as most essential to teaching excellence.

Plan of Study: You will be asked, with your informed consent, to complete a survey related to factors or attributes that you feel are important in the development of quality courses and for teaching excellence. The 51-item survey can be completed in 15 minutes or less.

Payment for Participation: You will not be paid for your voluntary participation in this unfunded study.

Benefits of Being a Part of this Research Study: Although you will not receive a direct personal benefit from your participation in this study, you participation will help our efforts to better inform faculty of the attributes that students view as most essential to teaching excellence.

INSTRUCTIONS FOR PARTICIPATING IN THE STUDY
1. Please complete the informed consent form provided to you and return it to the researcher.
2. Complete the 51-item survey that follows and mark your responses directly on the survey form.
3. Once you have completed the survey, please return the survey booklet.
Survey of Teaching Excellence

About this survey:
This survey is being used to assess community college students’ perceptions of teaching excellence. We are extremely interested in what you perceive as teaching excellence. On the following 45 survey items, please rate each statement in terms of its relative importance to teaching excellence. We are asking you to think in general about instructors and courses and not about evaluating your current or past instructors. Please mark your responses on this booklet.

Items should be rated using the following five-point scale:

A) OF NO IMPORTANCE TO TEACHING EXCELLENCE
B) OF LITTLE IMPORTANCE TO TEACHING EXCELLENCE
C) OF MODERATE IMPORTANCE TO TEACHING EXCELLENCE
D) OF GREAT IMPORTANCE TO TEACHING EXCELLENCE
E) OF CRITICAL IMPORTANCE TO TEACHING EXCELLENCE

1. You find the course intellectually challenging and stimulating. (A) (B) (C) (D) (E)
2. You learn something in the course, which you consider valuable. (A) (B) (C) (D) (E)
3. Your interest in the subject increases as a consequence of the course. (A) (B) (C) (D) (E)
4. You are able to learn and understand the subject materials in the course. (A) (B) (C) (D) (E)
5. The instructor is enthusiastic about teaching the course. (A) (B) (C) (D) (E)
6. The instructor is dynamic and energetic in conducting the course. (A) (B) (C) (D) (E)
7. The instructor enhances presentations with the use of humor. (A) (B) (C) (D) (E)
8. The instructor's style of presentation holds your interest during the class. (A) (B) (C) (D) (E)
9. The instructor's explanations are clear. (A) (B) (C) (D) (E)
10. The course materials are well prepared and carefully explained. (A) (B) (C) (D) (E)
11. The proposed course objectives agree with those actually taught so you know where the course is going. (A) (B) (C) (D) (E)
12. The instructor gives lectures that facilitate note taking. (A) (B) (C) (D) (E)
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A) OF NO IMPORTANCE TO TEACHING EXCELLENCE</td>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
<td>(D)</td>
</tr>
<tr>
<td>B) OF LITTLE IMPORTANCE TO TEACHING EXCELLENCE</td>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
<td>(D)</td>
</tr>
<tr>
<td>C) OF MODERATE IMPORTANCE TO TEACHING EXCELLENCE</td>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
<td>(D)</td>
</tr>
<tr>
<td>D) OF GREAT IMPORTANCE TO TEACHING EXCELLENCE</td>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
<td>(D)</td>
</tr>
<tr>
<td>E) OF CRITICAL IMPORTANCE TO TEACHING EXCELLENCE</td>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
<td>(D)</td>
</tr>
</tbody>
</table>

13. The instructor is friendly towards individual students. (A) (B) (C) (D) (E)
14. The instructor makes students feel welcome in seeking help/advice outside the classroom. (A) (B) (C) (D) (E)
15. The instructor has a genuine interest in individual students. (A) (B) (C) (D) (E)
16. The instructor is adequately accessible to students during office hours or after class. (A) (B) (C) (D) (E)
17. Students are encouraged to participate in class discussions. (A) (B) (C) (D) (E)
18. Students are invited to share their ideas and knowledge. (A) (B) (C) (D) (E)
19. Students are encouraged to ask questions and are given meaningful answers. (A) (B) (C) (D) (E)
20. Students are encouraged to express their own ideas and/or question the instructor. (A) (B) (C) (D) (E)
21. The instructor contrasts the implications of various theories. (A) (B) (C) (D) (E)
22. The instructor presents the background or origin of ideas/concepts developed in class. (A) (B) (C) (D) (E)
23. The instructor presents points of view other than his/her own when appropriate. (A) (B) (C) (D) (E)
24. The instructor adequately discusses current developments in the field. (A) (B) (C) (D) (E)
25. The required readings/text for the course are valuable. (A) (B) (C) (D) (E)
26. The class readings, homework, and assignments contribute to an appreciation and understanding of the subject. (A) (B) (C) (D) (E)
27. Feedback on evaluations/graded materials is valuable. (A) (B) (C) (D) (E)
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>28. The methods for evaluating student’s work are fair and appropriate.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>29. Exams/graded materials test the course content as emphasized by the instructor.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>30. The instructor uses appropriate technology in the classroom.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>31. The technology used in the course supports the goals of the class.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>32. Electronic communications (e.g., email, WebCt) are used to promote interaction and discussion.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>33. Instructional resources on the World Wide Web are used to promote student learning.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>34. The course helps me develop and refine my skills in using technology.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>35. The instructor encourages mutual respect among students of diverse backgrounds.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>36. The instructor is fair and unbiased in his/her treatment of all students.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>37. The instructor encourages discussion of diversity issues when appropriate to course content.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>38. The instructor demonstrates respect for all students (e.g., not demeaning to either individuals or subgroups).</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>39. The instructor takes appropriate steps to prevent or detect cheating.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>40. The instructor helps students develop their understanding of moral and ethical issues related to course content.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>41. The instructor relates standards for ethic and professional behavior to course content.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
<tr>
<td>42. The instructor models high and ethical standards with students.</td>
<td>(A) (B) (C) (D) (E)</td>
</tr>
</tbody>
</table>
### Questions on Teaching Excellence

1. The instructor uses alternative approaches to traditional lectures during class sessions. (A) (B) (C) (D) (E)

2. The instructor uses various forms of writing activities to enhance learning. (A) (B) (C) (D) (E)

3. The instructor has students work with partners or in groups to enhance learning. (A) (B) (C) (D) (E)

---

### Demographic Information

Please complete the following demographic items and mark your responses on this form:

46. Age: __________

47. Gender: (A) Female  (B) Male

48. Ethnic background: (A) African American  (B) Caucasian (White)  (C) Hispanic (D) Native American  (E) Other

49. Prior to this course I have completed ______ semester hours of college level course work. (Please DO NOT include hours earned through high school dual enrollment or advanced placement.)

   (A) Less than 12 hours  (B) 13-24 hours  (C) 25-36 hours  (D) 37-48 hours  (E) 49 hours or more

50. Primary reason for attending PHCC. Mark the answer that best fits your situation.

   (A) I plan to earn an AA or AS degree but currently have no plans to continue on to a four-year institution.
   (B) I plan to earn an AA or AS degree and plan to continue on to a four-year institution.
   (C) I am taking community college course for personal interests.
   (D) I plan to complete a certificate program.
   (E) I am currently seeking an employment upgrade or am retooling for a new career, but don’t intend to complete a degree or certificate.
   (F) I am a university student taking one or more community college classes.
51. Employment (hours per week): (A) 0 hours (B) 1-10 hours (C) 11-20 hours
(D) 21-30 hours (E) 31-40+ hours

Thank you for your participation.
Informed Consent
Social and Behavioral Sciences
University of South Florida
Information for People Who Take Part in Research Studies

The following information is being presented to help you decide whether or not you want to take part in a minimal risk research study. Please read this carefully. If you do not understand anything, please contact the person in charge of the study.

Title of Study: Teaching Excellence: Perceptions of Community College Students

Principal Investigator: Gary R. Oesch

Study Locations(s): Community College.
You are being asked to participate because you are a student enrolled at one of Florida’s public community colleges; we are inviting you to participate in this voluntary piece of important educational research.

General Information about the Research Study: The purpose of this research is to:
- explore students’ perceptions of teaching excellence in the community college setting.
  In particular, we hope to identify those factors/components that students view as most essential to teaching excellence.

Plan of Study: You will be asked, with your informed consent, to complete a survey related to factors or attributes that you feel are important in the development of quality courses and for teaching excellence. The 51 item survey can be completed in 15 minutes or less.

Payment for Participation: You will not be paid for your voluntary participation in this study.

Benefits of Being a Part of this Research Study: Although you will not receive a direct personal benefit from your participation in this study, participation will help our efforts to better inform faculty of the attributes that students view as most essential to teaching excellence.

Risks of Being a Part of This Research Study: There are no known risks. The researcher does not anticipate any physical, psychological, and/or social risk for participation in this study. Precautions to minimize these risks include informed consent, voluntary participation, and confidentiality ensured through anonymity.
Confidentiality of Your Records: Your privacy and research records will be kept confidential to the extent of the law. Authorized personnel, employees of the Department of Health and Human Services, and the USF Institutional Board may inspect the records from this research project. The results of this study may be published. However, the survey responses you provide will be combined with others in the publication. The published results will not include your name or any information that would personally identify you in any way. Your responses to the survey will be written directly to a database and maintained by the principal investigator. Only authorized persons will be granted access to the files. Survey responses will be reported in the aggregate, not as individual responses.

Volunteering to be Part of this Research Study: Your decision to participate in this research study is completely voluntary. You are free to participate in this research study or to withdraw at any time. If you choose not to participate, or if you withdraw, there will be no penalty.

Questions and Contacts: If you have any questions about this research study, contact Gary R. Oesch at 352-518-1282 or oeschg@phcc.edu. If you have any questions about your rights as a person who is taking part in a research study, you may contact a member of the Division of Research Compliance of the University of South Florida at 813-974-5638.

Consent to Take Part in This Research Study:
I agree to the following:
• I have fully read this informed consent form describing a research project.
• I have had the opportunity to question one of the persons in charge of this research and have received satisfactory answers.
• I understand that I am being asked to participate in research. I understand the risks and benefits, and I freely give my consent to participate in the research project outlined in this form, under the conditions indicated in it.
• I understand that I can receive a copy of this informed consent form for my safekeeping.

__________________________
Signature

__________________________
Printed name
Appendix E: Typical Community College Course Evaluation Form

Faculty and Course Evaluation by students

Instructor: __________________________  Section No: ________________
Course Title: _______________________  Prefix & No: _______________

INSTRUCTIONS:
Please respond to the following statements/questions. Place your responses on the provided answer sheet. Use a #2 pencil and firmly fill in the bubble that indicates your response to the item below. Comments should be placed on the back of this form.

Responses to questions 1 – 13 use the following scale:
(A) = Strongly Agree; (B) = Moderately Agree; (C) = Agree; (D) = Moderate Disagree; (E) Strongly Disagree

1. The instructor made available an understandable course outline/syllabus.
2. The instructor was prepared for class.
3. The instructor makes clear classroom presentations.
4. The instructor uses relevant examples and illustrations.
5. The instructor uses assessments (tests, assignments, etc.) that reflect the course content.
6. The instructor makes clear assignments.
7. The instructor provides feedback on tests and assignments.
8. The instructor grades according to criteria stated in the course outline/syllabus.
9. The instructor encourages student participation where course content permits.
10. The instructor treats students respectfully.
11. The instructor demonstrates concern for student learning.
12. The instructor is enthusiastic concerning his or her subject.
13. The instructor maintains classroom discipline.

14. Has the instructor exhibited any manner of discriminatory behavior toward students relative to their race, color, creed, gender, religion, national origin, handicap, sexual orientation, or other status? If your response is Yes, please bubble in response (A) and explain in the write-in area provided on the back of this form. If your response is No, please bubble in response (B).

15. How many hours per week outside of class do you spend on work for this class?
(A) = 0 – 3 (B) = 3 – 6 (C) = 6 – 9 (D) = 9 – 12 (E) = More than 12

16. Why did you select this course? (Check all that apply.)
(A) Required for degree
(B) Interested in the subject
(C) Recommendation of another student
(D) Other Please specify in the write-in area provided on the back of this form

17. What is your current GPA?
(A) = 3.5 – 4.0  (B) = 3.0 – 3.4  (C) = 2.0 – 2.9  (D) = Below 2.0  (E) = None as yet

18. As of this date, what grade do you expect in this course? (A) = A or B  (B) = C or S  (C) = F or U

19. Would you recommend this instructor?  (A) = Yes  (B) = No

20. Would you recommend this course to another student?  (A) = Yes  (B) = No

21. Is this the first course that you have taken from this instructor?  (A) = Yes  (B) = No
Thank you for your participation and cooperation in this very important research study. Although a number of studies have assessed university students’ perceptions of teaching excellence, we know very little about how community college students view teaching excellence. You are participating in a pilot study of a major dissertation research project. We are asking you to review the attached survey instrument (which will be used to survey approximately 1000 community college students) and help to assess several aspects of the instrument that will allow us to fine tune it for use in the main study.

1) For the first part of the focus group, we would like you to review survey instrument items 30 – 52. Note that items 1- 29 are taken from a previously developed instrument and will remain as they were originally designed. Items 30 – 52 were specifically designed for this study.

For items 30 – 45 (items 30- 34 are technology items; items 35-38 are diversity items; items 39-42 are ethics/integrity items; and items 43-45 are active learning items) please think about and comment about the following issues:

(a) clarity about each item
(b) the importance of item in relation to teaching excellence
(c) generate any alternative items if appropriate

2) Items 46 -52 are demographic data items. Can questions 50 and 51 be expanded further?

(a) for item 50, can you think of any other possible answers for this question?
(b) for item 51, can you think of any other possible answers for this question?
3) Finally, we have explored three different ways for students to mark their responses to this survey. Please review the three possible answering options and provide your opinion which would be best?

a) Survey Test booklet on which students mark directly – allows for wider range of responses.

b) Survey Test booklet with a separate optic sheet (see example) – fixed answer set

C) Optic scan form with question directed printed on the sheet – fixed answer set.

Thank you again for your participation. Your input is greatly appreciated.

Gary Oesch
Doctoral Candidate – University of South Florida
Appendix G: Summary of Faculty Focus Group

The Faculty focus group was held on September 20, 2004 at a community college located in central Florida. Five faculty members participated in the focus group for a period of 2 hours.

**Issue 1** - Faculty were asked to identify characteristics of teaching excellence as it differs from teaching effectiveness.

**Action** - Faculty generated a list of characteristics that define teaching excellence to them.

1. The instructor had an unusual command of his or her subject but also supplemented this knowledge with information from other fields (e.g., not only talked about Psychology, but also brought in information from the field of biology).
2. The instructor supplemented the lecture with music, art, etc., which gave the students so much more to grasp than simply listening to a lecture.
3. The instructor was not afraid to "put himself out there" and to be self-effacing and/or humorous as a way a drawing students into the lecture.
4. The instructor was fair and impartial - it was not evident that he/she had "favorites".
5. The instructor was excited about the subject he/she was teaching. One couldn't help but get excited about the subject based on the instructor's enthusiasm.
6. The instructor was up on current news/political events but was also up on current music, movies, TV, and other things that engaged students with "today's" issues. However, the instructor also introduced students to music, movies, TV, etc., that were not necessarily "mainstream" so that the students' horizons were broadened.
7. The class goes by quickly rather than dragging on.
8. The instructor cares about their students.
9. The instructor invites participation and discussion.

**Conclusions** – The items on the proposed survey appears to sample all the areas brought up by the students during the brainstorming session.

**Issue 2** - Use of test booklet, general scan form, or custom scan form.
Faculty agreed with students when it came to using a scan form. Students did not like the idea of using either scan form.

Conclusions – Faculty reported that they would be more likely to complete a test booklet on which they could mark their answers rather than a scan form of any type.

**Issue 3** - Should all questions begin with “the instructor _______?”

Faculty reported that they liked the fact that all the do not start with “the instructor.” They reported that different wording breaks the survey up and does not allow it to “get boring” or tedious. They believe that it would be a bad idea to make all the statements start the same.

Conclusions - It appears that we should leave the statements as they are in the final proposal document.

**Issue 4** - Are items 30-45 (Diversity, Ethics, Active Learning, and Technology) clear and are they important to teaching excellence?

**Action** – Faculty reported that all the items were clear and that they understood the intent and meaning of each item.

Faculty felt that all 16 items are important to teaching excellence. Several students remarked that it was the characteristics listed in these items that truly make the difference between an effective teacher and an excellent teacher. Students believed that all the items should be left as is.

Conclusions – Faculty appear to comprehend the items and believe that they are important to teaching excellence. They did not offer any alternative or additional items to be included in the survey.

**Issue 5** – On demographic items 50 and 51, can you think of additional answers to the statements.

**Action** - Faculty believed that the answers to 51 should be options for question 50 and then question 51 could be eliminated. They did not offer any other suggestions for additional items.

Conclusions – Item 51 could be eliminated and the answers moved to question 50, if
we use a survey booklet on which answers are recorded. We would simply add a F) and G) option to question 50. This issue would be more problematic if we use a scan form.
TEACHING EXCELLENCE: PERCEPTIONS OF COMMUNITY COLLEGE 
STUDENTS – RESEARCH STUDY 2004

STUDENT FOCUS GROUP

Thank you for your participation and cooperation in this very important research study. Although a number of studies have assessed university students’ perceptions of teaching excellence, we know very little about how community college students view teaching excellence. You are participating in a pilot study of a major dissertation research project. We are asking you to review the attached survey instrument (which will be used to survey approximately 1000 students) and help to assess several aspects of the instrument that will allow us to fine tune it for use in the main study.

1) For the first part of the focus group, we would like you to review survey instrument items 30 – 52. Note that items 1-29 are taken from a previously developed instrument and will remain as they were originally designed. Items 30 – 52 were specifically designed for this study.

For items 30 – 45 (items 30-34 are technology items; items 35-38 are diversity items; items 39-42 are ethics/integrity items; and items 43-45 are active learning items) please think about and comment about the following issues:

   (a) clarity about each item
   (b) the importance of item in relation to teaching excellence
   (c) generate any alternative items if appropriate

2) Items 46 -52 are demographic data items. Can questions 50 and 51 be expanded further?

   (a) for item 50, can you think of any other possible answers for this question?

   (b) for item 51, can you think of any other possible answers for this question?
3) Finally, we have explored three different ways for students to mark their responses to this survey. Please review the three possible answering options and provide your opinion which would be best?

a) Survey Test booklet on which students mark directly – allows for wider range of responses.
b) Survey Test booklet with a separate optic sheet (see example) – fixed answer set
c) Optic scan form with question directed printed on the sheet – fixed answer set.

Thank you again for your participation. Your input is greatly appreciated.

Gary Oesch
Doctoral Candidate – University of South Florida
Appendix I: Summary of Student Focus Group

The student focus group was held on September 14, 2004 at a central Florida community college. Nine student members participated in the focus group for a period of 1½ hours.

**Issue 1** – Students were asked to identify characteristics of teaching excellence as it differs from teaching effectiveness.

**Action** - Students generated a list of characteristics that define teaching excellence to them.

1. The instructor had an unusual command of his or her subject.
2. The instructor was fair and impartial - it was not evident that he/she had "favorites".
3. The instructor was excited about the subject he/she was teaching.
4. The instructor was up on current news/political events but was also up on current music, movies, TV, and other things that engaged students with "today's" issues.
5. The class goes by quickly rather than dragging on.
6. The instructor cares about their students.
7. The instructor invites participation and discussion.
8. The instructor uses humor in the classroom

**Conclusions** – The items on the proposed survey appears to sample all the areas brought up by the students during the brainstorming session.

**Issue 2** - Use of test booklet, general scan form, or custom scan form.

Students did not like the idea of using either scan form. They liked the idea of using a test booklet that they could write on. One student reported that they would be less likely to complete the scan form. He also thought that students would be more likely to randomly (“Christmas tree”) the scan forms, even if it was a custom form with the questions on it. Another student told me that the scan forms reminded her of a test and therefore she would have a negative attitude toward the form. Another student stated that she thought the test booklet made it more personal and she felt like we really valued her input.
Conclusions – Students reported that they would be more likely to complete a test booklet on which they could mark their answers rather than a scan form of any type.

Issue 3 - Should all questions begin with “the instructor _______?”

Students reported that they liked the fact that all do not start with “the instructor.” They reported that different wording breaks the survey up and does not allow it to “get boring” or tedious. They believe that it would be a bad idea to make all the statements start the same.

Conclusions - It appears that we should leave the statements as they are in the final proposal document.

Issue 4 - Are items 30-45 (Diversity, Ethics, Active Learning, and Technology) clear and are they important to teaching excellence?

Action – Students reported that all the items were clear and that they understood the intent and meaning of each item.

Students reported they felt that all 16 items are important to teaching excellence. Several students remarked that it was the characteristics listed in these items that truly make the difference between an effective teacher and an excellent teacher. Students believed that all the items should be left as is.

Conclusions – Students appear to comprehend the items and believe that they are important to teaching excellence. They did not offer any alternative or additional items to be included in the survey.

Issue 5 – On demographic items 50 and 51, can you think of additional answers to the statements.

Action - Students believed that the answers to 51 should be options for question 50 and then question 51 could be eliminated. They did not offer any other suggestions for additional items.

Conclusions – Item 51 could be eliminated and the answers moved to question 50, if we use a survey booklet on which answers are recorded. We would simply add a F) and G) option to question 50. This issue would be more problematic if we use a scan form.
Appendix J: Summary of panel of experts – pilot study


Comments from Panel of Experts:

William McKeachie - "Your items look good to me. I have no suggestions for changes."

Kenneth Feldman - "The items seem fine to me. I do have one small comment. Item 30 could also read: The instructor uses appropriate technology in the classroom. This wording has a slightly different meaning from that of your wording."

Michael Theall - "I like the items that you have used. Is there a reason why you do not use standard tense?" "On item 30, I would take the word 'appropriately' out and reword the item." "If you wanted to expand your study at some point, I would include more items that address student engagement in the learning process." "A delimitation of your study is that students may not always be the best judge when it comes to some of your items."

Jennifer Franklin - "My bias would be to put some the items in first person." "Basically, you have good items, but they could be expanded more if you want to go further with this research." "You might want to employ the services of a professional assessment item writer if you want to expand this study further."

Modifications of survey after comments from panel of experts and focus groups:

1) Item 30 now reads "The instructor uses appropriate technology in the classroom."

2) A survey booklet will be employed rather than a scan form.

3) Item 46 allows the student to write in their age.

4) Item 50 responses: (A) To earn an AA degree, with no plans to continue on to a four-year institution; (B) To earn an AA degree, with plans to continue on to a four-year institution; (C) To earn an AS degree; (D) For personal interest; (E) To complete a certificate program; (F) Seeking an employment upgrade/retooling; (G) A university student taken one or more community college classes.
Author Note

Gary R. Oesch is a doctoral candidate in the College of Education at the University of South Florida in Tampa, Florida. He is an Assistant Professor of Psychology/Education at Pasco-Hernando Community College in Dade City, Florida.

The author would like to thank the following individuals for their assistance and cooperation in conducting this study:

Robert W. Judson, Jr., Ed.D,
Paul Szuch, Ed.D.
Stanley Giannett, Ph.D.
Marion Bullock, Ph.D.
Randy Stovall, Ph.D.
Bonnie Clark, M.S.
Michael Sadusky, M. A.
Juan Burbano, Ed.D.
Larry Eason, Ph.D.
Kelvin Faison, M. Ed.
Janet Paskins, M.A.
Barbara Powell, M.A.
Michael Long, M.S.
Deborah Amburgey, M.A.

For further information regarding this Dissertation, contact Gary R. Oesch, Pasco-Hernando Community College, 36727 Blanton Road, Dade City, Florida 33523-7599
Table 1  
*Breakdown of Student Participants’ Demographic Data*

<table>
<thead>
<tr>
<th>Variable</th>
<th>$n$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>22.57</td>
<td></td>
</tr>
<tr>
<td>Standard deviation</td>
<td>7.52</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>17 to 77</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>698</td>
<td>66</td>
</tr>
<tr>
<td>Male</td>
<td>349</td>
<td>34</td>
</tr>
<tr>
<td>Ethnic background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>37</td>
<td>3.5</td>
</tr>
<tr>
<td>Caucasian (White)</td>
<td>871</td>
<td>83.2</td>
</tr>
<tr>
<td>Hispanic</td>
<td>70</td>
<td>6.6</td>
</tr>
<tr>
<td>Native American</td>
<td>12</td>
<td>1.1</td>
</tr>
<tr>
<td>Other</td>
<td>57</td>
<td>5.4</td>
</tr>
<tr>
<td>Semester Hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 12 hours</td>
<td>472</td>
<td>45.1</td>
</tr>
<tr>
<td>13 – 24 hours</td>
<td>189</td>
<td>8.1</td>
</tr>
<tr>
<td>25 – 36 hours</td>
<td>153</td>
<td>14.6</td>
</tr>
<tr>
<td>37 – 48 hours</td>
<td>101</td>
<td>9.6</td>
</tr>
<tr>
<td>49 hours or more</td>
<td>132</td>
<td>12.6</td>
</tr>
</tbody>
</table>
Table 1 continued

*Breakdown of Student Participants’ Demographic Data*

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reason for Attendance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A) I plan to earn an AA or AS degree but currently have no plans to</td>
<td>169</td>
<td>16.1</td>
</tr>
<tr>
<td>continue on to a four-year institution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B) I plan to earn an AA or AS degree and plan on to continue on to a</td>
<td>798</td>
<td>76.2</td>
</tr>
<tr>
<td>four-year institution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C) I am taking community college course for personal interests</td>
<td>26</td>
<td>2.5</td>
</tr>
<tr>
<td>D) I plan to complete a certificate program</td>
<td>23</td>
<td>2.2</td>
</tr>
<tr>
<td>E) I am currently seeking an employment upgrade or I am retooling for</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>a new career, but don’t intend to complete a degree or certificate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F) I am a university student taking one or more community college</td>
<td>21</td>
<td>2</td>
</tr>
<tr>
<td>classes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 1 continued

*Breakdown of Student Participants’ Demographic Data*

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment (hours per week)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A) 0 hours</td>
<td>220</td>
<td>21</td>
</tr>
<tr>
<td>B) 1 - 10 hours</td>
<td>72</td>
<td>7</td>
</tr>
<tr>
<td>C) 11 – 20 hours</td>
<td>157</td>
<td>15</td>
</tr>
<tr>
<td>D) 21 – 30 hours</td>
<td>254</td>
<td>24</td>
</tr>
<tr>
<td>E) 31 – 40 hours</td>
<td>344</td>
<td>33</td>
</tr>
</tbody>
</table>
Table 2

*Descriptive Statistics of Dimensions Used in the Study Survey (N=1047)*

<table>
<thead>
<tr>
<th>Dimension</th>
<th># of Items</th>
<th>Cronbach Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Examination</td>
<td>3</td>
<td>.74</td>
<td>4.33</td>
<td>0.66</td>
<td>-1.49</td>
</tr>
<tr>
<td>Diversity</td>
<td>4</td>
<td>.80</td>
<td>4.30</td>
<td>0.70</td>
<td>-1.43</td>
</tr>
<tr>
<td>Enthusiasm</td>
<td>4</td>
<td>.78</td>
<td>4.24</td>
<td>0.64</td>
<td>-0.92</td>
</tr>
<tr>
<td>Learn</td>
<td>4</td>
<td>.65</td>
<td>4.14</td>
<td>0.59</td>
<td>-1.01</td>
</tr>
<tr>
<td>Clarity</td>
<td>4</td>
<td>.67</td>
<td>4.08</td>
<td>0.61</td>
<td>-0.75</td>
</tr>
<tr>
<td>Rapport</td>
<td>4</td>
<td>.78</td>
<td>3.99</td>
<td>0.75</td>
<td>-0.77</td>
</tr>
<tr>
<td>Ethics</td>
<td>4</td>
<td>.83</td>
<td>3.97</td>
<td>0.78</td>
<td>-0.79</td>
</tr>
<tr>
<td>Assignments</td>
<td>2</td>
<td>.78</td>
<td>3.96</td>
<td>0.88</td>
<td>-0.85</td>
</tr>
<tr>
<td>Group</td>
<td>4</td>
<td>.87</td>
<td>3.91</td>
<td>0.80</td>
<td>-0.52</td>
</tr>
<tr>
<td>Breadth</td>
<td>4</td>
<td>.81</td>
<td>3.78</td>
<td>0.73</td>
<td>-0.40</td>
</tr>
<tr>
<td>Active</td>
<td>3</td>
<td>.61</td>
<td>3.64</td>
<td>0.83</td>
<td>-0.40</td>
</tr>
<tr>
<td>Technology</td>
<td>5</td>
<td>.85</td>
<td>3.35</td>
<td>0.85</td>
<td>-0.16</td>
</tr>
</tbody>
</table>

Table is presented with means from the highest to the lowest.

All dimensions had mean range with a minimum of 1 and a maximum of 5.
Table 3

*Item Means and Standard Deviations of Student Responses* (Ordered by Means) N=1047

<table>
<thead>
<tr>
<th>Mean</th>
<th>SD</th>
<th>Item</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.56</td>
<td>0.75</td>
<td>The instructor is fair and unbiased in his/her treatment of all students. (D)</td>
<td></td>
</tr>
<tr>
<td>4.55</td>
<td>0.69</td>
<td>The instructor's explanations are clear.                               (OC)</td>
<td></td>
</tr>
<tr>
<td>4.53</td>
<td>0.80</td>
<td>The instructor demonstrates respect for all students (e.g., not demeaning to either individuals or subgroups). (D)</td>
<td></td>
</tr>
<tr>
<td>4.47</td>
<td>0.77</td>
<td>The methods for evaluating student work are fair and appropriate. (E)</td>
<td></td>
</tr>
<tr>
<td>4.44</td>
<td>0.74</td>
<td>The instructor is enthusiastic about teaching the course. (IE)</td>
<td></td>
</tr>
<tr>
<td>4.40</td>
<td>0.82</td>
<td>You are able to learn and understand the subject materials in the course. (LV)</td>
<td></td>
</tr>
<tr>
<td>4.35</td>
<td>0.74</td>
<td>The course materials are well prepared and carefully explained. (OC)</td>
<td></td>
</tr>
<tr>
<td>4.35</td>
<td>0.76</td>
<td>The instructor's style of presentation holds your interest during class. (IE)</td>
<td></td>
</tr>
<tr>
<td>4.34</td>
<td>0.78</td>
<td>You learn something in the course, which you consider valuable. (LV)</td>
<td></td>
</tr>
<tr>
<td>4.30</td>
<td>0.84</td>
<td>The instructor makes students feel welcome in seeking help/advice outside the classroom. (IR)</td>
<td></td>
</tr>
<tr>
<td>4.30</td>
<td>0.81</td>
<td>Feedback on evaluations/graded materials is valuable. (E)</td>
<td></td>
</tr>
<tr>
<td>4.25</td>
<td>0.80</td>
<td>The instructor is dynamic and energetic in conducting the course. (IE)</td>
<td></td>
</tr>
<tr>
<td>4.24</td>
<td>0.85</td>
<td>Exams/graded materials test the course content as emphasized by the instructor. (E)</td>
<td></td>
</tr>
</tbody>
</table>
### Table 3 continued

*Item Means and Standard Deviations of Student Responses*

<table>
<thead>
<tr>
<th>Mean</th>
<th>SD</th>
<th>Item</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.19</td>
<td>1.00</td>
<td>The instructor encourages mutual respect among students of diverse backgrounds.</td>
<td>(D)</td>
</tr>
<tr>
<td>4.15</td>
<td>0.85</td>
<td>Students are encouraged to ask questions and are given meaningful answers.</td>
<td>(GI)</td>
</tr>
<tr>
<td>4.06</td>
<td>0.91</td>
<td>The class readings, homework, and assignments contribute to an appreciation and understanding of the subject.</td>
<td>(AR)</td>
</tr>
<tr>
<td>4.05</td>
<td>0.95</td>
<td>The instructor models high professional and ethical standards with students.</td>
<td>(EI)</td>
</tr>
<tr>
<td>4.04</td>
<td>1.02</td>
<td>The instructor takes appropriate steps to prevent or detect cheating.</td>
<td>(EI)</td>
</tr>
<tr>
<td>4.01</td>
<td>0.94</td>
<td>The instructor uses alternative approaches to traditional lectures during class sessions.</td>
<td>(AL)</td>
</tr>
<tr>
<td>4.01</td>
<td>0.89</td>
<td>The proposed course objectives agree with those actually taught so you know where the course is going.</td>
<td>(OC)</td>
</tr>
<tr>
<td>3.99</td>
<td>0.86</td>
<td>You find the course intellectually challenging and stimulating.</td>
<td>(VL)</td>
</tr>
<tr>
<td>3.99</td>
<td>0.87</td>
<td>The instructor presents points of view other than his/her own when appropriate.</td>
<td>(BOC)</td>
</tr>
</tbody>
</table>
Table 3 continued

*Item Means and Standard Deviations of Student Responses*

<table>
<thead>
<tr>
<th>Mean</th>
<th>SD</th>
<th>Item</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.98</td>
<td>0.90</td>
<td>The instructor is adequately accessible to students during office</td>
<td>(IR)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hours or after class.</td>
<td></td>
</tr>
<tr>
<td>3.96</td>
<td>0.98</td>
<td>The instructor enhances presentations with the use of humor.</td>
<td>(IE)</td>
</tr>
<tr>
<td>3.95</td>
<td>0.93</td>
<td>The instructor encourages discussion of diversity issues when</td>
<td>(D)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>appropriate to course content.</td>
<td></td>
</tr>
<tr>
<td>3.94</td>
<td>1.01</td>
<td>The instructor is friendly toward individual students.</td>
<td>(IR)</td>
</tr>
<tr>
<td>3.93</td>
<td>0.93</td>
<td>Students are encouraged to express their own ideas and/or question</td>
<td>(GI)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the instructor.</td>
<td></td>
</tr>
<tr>
<td>3.92</td>
<td>0.95</td>
<td>The instructor helps students develop their understanding of moral</td>
<td>(EI)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and ethical issues related to course content.</td>
<td></td>
</tr>
<tr>
<td>3.87</td>
<td>0.93</td>
<td>The instructor related standards for ethical and professional behavior</td>
<td>(EI)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to course content.</td>
<td></td>
</tr>
<tr>
<td>3.87</td>
<td>1.04</td>
<td>The required readings/text for the course are valuable.</td>
<td>(AR)</td>
</tr>
<tr>
<td>3.85</td>
<td>0.97</td>
<td>Students are invited to share their ideas and knowledge.</td>
<td>(GI)</td>
</tr>
<tr>
<td>3.84</td>
<td>0.92</td>
<td>Your interest in the subject increase as a consequence of the course.</td>
<td>(VL)</td>
</tr>
<tr>
<td>3.78</td>
<td>0.90</td>
<td>The instructor adequately discusses current developments in the field.</td>
<td>(BOC)</td>
</tr>
<tr>
<td>3.75</td>
<td>1.09</td>
<td>The instructor has a genuine interest in individual students.</td>
<td>(IR)</td>
</tr>
</tbody>
</table>
Table 3 continued

*Item Means and Standard Deviations of Student Responses*

<table>
<thead>
<tr>
<th>Mean</th>
<th>SD</th>
<th>Item</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.73</td>
<td>1.03</td>
<td>The instructor uses technology appropriately in the classroom.</td>
<td>(T)</td>
</tr>
<tr>
<td>3.72</td>
<td>0.91</td>
<td>The instructor contrasts the implications of various theories.</td>
<td>(BOC)</td>
</tr>
<tr>
<td>3.72</td>
<td>1.02</td>
<td>Students are encouraged to participate in class discussions.</td>
<td>(GI)</td>
</tr>
<tr>
<td>3.71</td>
<td>1.00</td>
<td>The technology used in the course supports the goals of the class.</td>
<td>(T)</td>
</tr>
<tr>
<td>3.65</td>
<td>0.96</td>
<td>The instructor presents the background or origin of ideas/concepts developed in class.</td>
<td>(BOC)</td>
</tr>
<tr>
<td>3.48</td>
<td>1.08</td>
<td>The instructor uses various forms of writing activities to enhance learning.</td>
<td>(AL)</td>
</tr>
<tr>
<td>3.45</td>
<td>1.19</td>
<td>The instructor has students work with partners or in groups to enhance learning.</td>
<td>(AL)</td>
</tr>
<tr>
<td>3.43</td>
<td>1.06</td>
<td>The instructor gives lectures that facilitate note taking.</td>
<td>(OC)</td>
</tr>
<tr>
<td>3.18</td>
<td>1.09</td>
<td>Instructional resources on the World Wide Web are used to promote student learning.</td>
<td>(T)</td>
</tr>
<tr>
<td>3.09</td>
<td>1.14</td>
<td>Electronic communications (e.g., email, WebCT) is used to promote interaction and discussion.</td>
<td>(T)</td>
</tr>
<tr>
<td>3.08</td>
<td>1.11</td>
<td>The course helps me develop and refine my skills in using technology.</td>
<td>(T)</td>
</tr>
</tbody>
</table>
Table 3 continued

*Legend to Dimension codes:

LV – Learning/Value; IE- Instructor Enthusiasm; OC – Organization/Clarity;
IR – Individual Rapport; GI – Group Interaction; BOC – Breadth of Coverage;
AR – Assignments/Reading; T – Technology; D – Diversity: AL – Active Learning;
EI -Ethics/Integrity.
Table 4

Confirmatory Factor Analysis for Marsh’s Original Eight dimensions with Standardized Estimates and Standard Errors ($N = 1047$)

<table>
<thead>
<tr>
<th></th>
<th>Standardized</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Learn</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1</td>
<td>0.42</td>
<td>0.00</td>
</tr>
<tr>
<td>Q2</td>
<td>0.49</td>
<td>0.09</td>
</tr>
<tr>
<td>Q3</td>
<td>0.48</td>
<td>0.10</td>
</tr>
<tr>
<td>Q4</td>
<td>0.51</td>
<td>0.09</td>
</tr>
<tr>
<td><strong>Enthus</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q5</td>
<td>0.58</td>
<td>0.00</td>
</tr>
<tr>
<td>Q6</td>
<td>0.67</td>
<td>0.04</td>
</tr>
<tr>
<td>Q7</td>
<td>0.58</td>
<td>0.05</td>
</tr>
<tr>
<td>Q8</td>
<td>0.41</td>
<td>0.04</td>
</tr>
<tr>
<td><strong>Clarity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q9</td>
<td>0.50</td>
<td>0.00</td>
</tr>
<tr>
<td>Q10</td>
<td>0.54</td>
<td>0.05</td>
</tr>
<tr>
<td>Q11</td>
<td>0.54</td>
<td>0.06</td>
</tr>
<tr>
<td>Q12</td>
<td>0.41</td>
<td>0.07</td>
</tr>
<tr>
<td><strong>Rapport</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q13</td>
<td>0.67</td>
<td>0.00</td>
</tr>
<tr>
<td>Q14</td>
<td>0.62</td>
<td>0.04</td>
</tr>
<tr>
<td>Q15</td>
<td>0.76</td>
<td>0.06</td>
</tr>
<tr>
<td>Q16</td>
<td>0.60</td>
<td>0.05</td>
</tr>
</tbody>
</table>
Table 4 continued

*Confirmatory Factor Analysis for Marsh’s Original Eight dimensions with Standardized Estimates and Standard Errors (N = 1047)*

<table>
<thead>
<tr>
<th>Group</th>
<th>By</th>
<th>Standardized</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Estimate</td>
<td></td>
</tr>
<tr>
<td>Q17</td>
<td></td>
<td>0.81</td>
<td>0.00</td>
</tr>
<tr>
<td>Q18</td>
<td></td>
<td>0.82</td>
<td>0.03</td>
</tr>
<tr>
<td>Q19</td>
<td></td>
<td>0.65</td>
<td>0.03</td>
</tr>
<tr>
<td>Q20</td>
<td></td>
<td>0.70</td>
<td>0.03</td>
</tr>
<tr>
<td>Breadth</td>
<td>By</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q21</td>
<td></td>
<td>0.68</td>
<td>0.00</td>
</tr>
<tr>
<td>Q22</td>
<td></td>
<td>0.77</td>
<td>0.04</td>
</tr>
<tr>
<td>Q23</td>
<td></td>
<td>0.59</td>
<td>0.04</td>
</tr>
<tr>
<td>Q24</td>
<td></td>
<td>0.61</td>
<td>0.04</td>
</tr>
<tr>
<td>Assign</td>
<td>By</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q25</td>
<td></td>
<td>0.78</td>
<td>0.00</td>
</tr>
<tr>
<td>Q26</td>
<td></td>
<td>0.78</td>
<td>0.04</td>
</tr>
<tr>
<td>Exam</td>
<td>By</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q27</td>
<td></td>
<td>0.56</td>
<td>0.00</td>
</tr>
<tr>
<td>Q28</td>
<td></td>
<td>0.55</td>
<td>0.05</td>
</tr>
<tr>
<td>Q29</td>
<td></td>
<td>0.59</td>
<td>0.06</td>
</tr>
</tbody>
</table>
Table 4 continued

*Confirmatory Factor Analysis for Marsh’s Original Eight dimensions with Standardized Estimates and Standard Errors* (*N* = 1047)

<table>
<thead>
<tr>
<th>Standardized Estimate</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variances</strong></td>
<td></td>
</tr>
<tr>
<td>Learn</td>
<td>0.18</td>
</tr>
<tr>
<td>Enthus</td>
<td>0.34</td>
</tr>
<tr>
<td>Clarity</td>
<td>0.25</td>
</tr>
<tr>
<td>Rapport</td>
<td>0.45</td>
</tr>
<tr>
<td>Group</td>
<td>0.65</td>
</tr>
<tr>
<td>Breadth</td>
<td>0.47</td>
</tr>
<tr>
<td>Assign</td>
<td>0.61</td>
</tr>
<tr>
<td>Exam</td>
<td>0.31</td>
</tr>
</tbody>
</table>
Table 5

*Correlation Matrix of Eight Dimensions (N = 1047)*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Enthusiasm</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Learn</td>
<td>.537</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Clarity</td>
<td>.638</td>
<td>.771</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Rapport</td>
<td>.608</td>
<td>.492</td>
<td>.619</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Group</td>
<td>.469</td>
<td>.395</td>
<td>.473</td>
<td>.668</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Breadth</td>
<td>.465</td>
<td>.522</td>
<td>.574</td>
<td>.622</td>
<td>.696</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Assignment</td>
<td>.397</td>
<td>.592</td>
<td>.651</td>
<td>.455</td>
<td>.506</td>
<td>.592</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>8. Examination</td>
<td>.518</td>
<td>.709</td>
<td>.784</td>
<td>.593</td>
<td>.465</td>
<td>.556</td>
<td>.712</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Table 6

*Correlation Matrix of Eight Dimensions – Marsh’s SEEQ*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Enthusiasm</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Learn</td>
<td>.434</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Clarity</td>
<td>.427</td>
<td>.407</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Rapport</td>
<td>.400</td>
<td>.263</td>
<td>.331</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Group</td>
<td>.364</td>
<td>.350</td>
<td>.210</td>
<td>.455</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Breadth</td>
<td>.419</td>
<td>.449</td>
<td>.454</td>
<td>.352</td>
<td>.327</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Assignment</td>
<td>.319</td>
<td>.488</td>
<td>.431</td>
<td>.338</td>
<td>.312</td>
<td>.418</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>8. Examination</td>
<td>.392</td>
<td>.401</td>
<td>.511</td>
<td>.493</td>
<td>.315</td>
<td>.403</td>
<td>.510</td>
<td>1.00</td>
</tr>
</tbody>
</table>
### Table 7

*Top 10 Modification Indices for Factor Loadings of the CFA (Eight Dimension Model)*

<table>
<thead>
<tr>
<th>M.I. value</th>
<th>Question (Item) Number</th>
<th>Designated and Item Loading</th>
<th>Secondary Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>144.63</td>
<td>8. The instructor’s style of presentation holds your interest during class</td>
<td>Enthusiasm</td>
<td>Clarity</td>
</tr>
<tr>
<td>109.61</td>
<td>8. The instructor’s style of presentation holds your interest during class</td>
<td>Enthusiasm</td>
<td>Clarity</td>
</tr>
<tr>
<td>97.36</td>
<td>12. The instructor gives lectures that facilitate note taking.</td>
<td>Organ/Clarity</td>
<td>Breadth</td>
</tr>
<tr>
<td>79.89</td>
<td>19. Students are encouraged to ask questions and are given meaningful answers.</td>
<td>Group</td>
<td>Exam</td>
</tr>
<tr>
<td>78.88</td>
<td>8. The instructor’s style of presentation holds your interest during class</td>
<td>Enthusiasm</td>
<td>Exam</td>
</tr>
</tbody>
</table>
Table 7 continued

*Top 10 Modification Indices for Factor Loadings of the CFA (Eight Dimension Model)*

<table>
<thead>
<tr>
<th>M.I. value</th>
<th>Question (Item) Number and Item</th>
<th>Designated and Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>64.30</td>
<td>12. The instructor gives lectures that facilitate note taking.</td>
<td>Organ/Clarity Group</td>
</tr>
<tr>
<td>55.31</td>
<td>9. The instructor’s explanations are clear.</td>
<td>Organ/Clarity Group</td>
</tr>
<tr>
<td>51.29</td>
<td>19. Students are encouraged to ask questions and are given meaningful answers.</td>
<td>Group Organ/Clarity</td>
</tr>
<tr>
<td>48.22</td>
<td>6. The instructor is dynamic and energetic in conducting the course.</td>
<td>Enthusiasm Learn</td>
</tr>
<tr>
<td>47.48</td>
<td>19. Students are encouraged to ask questions and are given meaningful answers.</td>
<td>Group Learn</td>
</tr>
</tbody>
</table>
Table 8

*Top 10 Modifications Indices for Covariances of Uniquenesses (Eight Dimension Model)*

<table>
<thead>
<tr>
<th>Pair Number</th>
<th>M.I. value</th>
<th>Question (Item) Number</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>91.68</td>
<td>15. The instructor has a genuine interest in individual students.</td>
<td>Rapport</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13. The instructor is friendly toward individual students.</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>87.25</td>
<td>18. Students are invited to share their ideas and knowledge.</td>
<td>Group</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17. Students are encouraged to participate in class discussions.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>80.06</td>
<td>9. The instructor’s explanations are clear.</td>
<td>Organ/Clarity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. You are able to learn and understand the subject materials in the course.</td>
<td>Learning</td>
</tr>
</tbody>
</table>
Table 8 continued

*Top 10 Modification Indices for Covariances of Uniquenesses (Eight Dimension Model)*

<table>
<thead>
<tr>
<th>Pair Number</th>
<th>M.I. value</th>
<th>Question (Item) Number</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>65.33</td>
<td>6. The instructor is dynamic and energetic in conducting the course.</td>
<td>Enthusiasm</td>
</tr>
<tr>
<td>5</td>
<td>63.03</td>
<td>5. The instructor is enthusiastic about teaching the course.</td>
<td>Enthusiasm</td>
</tr>
<tr>
<td>5</td>
<td>63.03</td>
<td>9. The instructor’s explanations are clear.</td>
<td>Organ/Clarity</td>
</tr>
<tr>
<td>6</td>
<td>59.26</td>
<td>9. The instructor’s explanations are clear.</td>
<td>Organ/Clarity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8. The instructor’s style of presentation holds your interest during class.</td>
<td>Enthusiasm</td>
</tr>
</tbody>
</table>
Table 8 continued

*Top 10 Modification Indices for Covariances of Uniquenesses (Eight Dimension Model)*

<table>
<thead>
<tr>
<th>Pair Number</th>
<th>M.I. value</th>
<th>Question (Item) Number</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>38.20</td>
<td>8. The instructor’s style of presentation holds your interest during class.</td>
<td>Enthusiasm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6. The instructor is dynamic and energetic in conducting the course.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>36.22</td>
<td>22. The instructor presents the background or origin of ideas/concepts developed in class.</td>
<td>Breadth</td>
</tr>
<tr>
<td></td>
<td></td>
<td>21. The instructor contrasts the implications of various theories.</td>
<td></td>
</tr>
</tbody>
</table>
Table 8 continued

*Top 10 Modification Indices for Covariances of Uniquenesses (Eight Dimension Model)*

<table>
<thead>
<tr>
<th>Pair Number</th>
<th>M.I. value</th>
<th>Question (Item) Number</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>35.45</td>
<td>28. The methods for evaluating student work are fair and appropriate.</td>
<td>Examinations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. The instructor’s explanations are clear.</td>
<td>Organ/Clarity</td>
</tr>
<tr>
<td>10</td>
<td>34.30</td>
<td>16. The instructor is adequately accessible to students during office hours or after class.</td>
<td>Rapport</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13. The instructor is friendly toward individual students.</td>
<td>Rapport</td>
</tr>
</tbody>
</table>
### Table 9

**Model Results for Confirmatory Factor Analysis 12 Dimensions with Standardized Estimates and Standard Errors (N=1047)**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Standardized Estimate</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1</td>
<td>0.43</td>
<td>0.00</td>
</tr>
<tr>
<td>Q2</td>
<td>0.49</td>
<td>0.09</td>
</tr>
<tr>
<td>Q3</td>
<td>0.48</td>
<td>0.09</td>
</tr>
<tr>
<td>Q4</td>
<td>0.51</td>
<td>0.09</td>
</tr>
<tr>
<td>Enthus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q5</td>
<td>0.58</td>
<td>0.00</td>
</tr>
<tr>
<td>Q6</td>
<td>0.67</td>
<td>0.04</td>
</tr>
<tr>
<td>Q7</td>
<td>0.58</td>
<td>0.05</td>
</tr>
<tr>
<td>Q8</td>
<td>0.47</td>
<td>0.04</td>
</tr>
<tr>
<td>Clarity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q9</td>
<td>0.49</td>
<td>0.00</td>
</tr>
<tr>
<td>Q10</td>
<td>0.54</td>
<td>0.05</td>
</tr>
<tr>
<td>Q11</td>
<td>0.55</td>
<td>0.06</td>
</tr>
<tr>
<td>Q12</td>
<td>0.42</td>
<td>0.07</td>
</tr>
<tr>
<td>Rapport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q13</td>
<td>0.66</td>
<td>0.00</td>
</tr>
<tr>
<td>Q14</td>
<td>0.62</td>
<td>0.04</td>
</tr>
<tr>
<td>Q15</td>
<td>0.76</td>
<td>0.06</td>
</tr>
<tr>
<td>Q16</td>
<td>0.60</td>
<td>0.05</td>
</tr>
</tbody>
</table>
Table 9 continued

*Model Results for Confirmatory Factor Analysis 12 Dimensions with Standardized Estimates and Standard Errors*

<table>
<thead>
<tr>
<th>Group</th>
<th>By</th>
<th>Standardized Estimate</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q17</td>
<td></td>
<td>0.81</td>
<td>0.00</td>
</tr>
<tr>
<td>Q18</td>
<td></td>
<td>0.83</td>
<td>0.03</td>
</tr>
<tr>
<td>Q19</td>
<td></td>
<td>0.65</td>
<td>0.03</td>
</tr>
<tr>
<td>Q20</td>
<td></td>
<td>0.70</td>
<td>0.03</td>
</tr>
<tr>
<td>Breadth</td>
<td>By</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q21</td>
<td></td>
<td>0.68</td>
<td>0.00</td>
</tr>
<tr>
<td>Q22</td>
<td></td>
<td>0.78</td>
<td>0.04</td>
</tr>
<tr>
<td>Q23</td>
<td></td>
<td>0.58</td>
<td>0.04</td>
</tr>
<tr>
<td>Q24</td>
<td></td>
<td>0.62</td>
<td>0.04</td>
</tr>
<tr>
<td>Assign</td>
<td>By</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q25</td>
<td></td>
<td>0.79</td>
<td>0.00</td>
</tr>
<tr>
<td>Q26</td>
<td></td>
<td>0.77</td>
<td>0.04</td>
</tr>
<tr>
<td>Exam</td>
<td>By</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q27</td>
<td></td>
<td>0.55</td>
<td>0.00</td>
</tr>
<tr>
<td>Q28</td>
<td></td>
<td>0.56</td>
<td>0.05</td>
</tr>
<tr>
<td>Q29</td>
<td></td>
<td>0.59</td>
<td>0.05</td>
</tr>
</tbody>
</table>
Table 9 continued

*Model Results for Confirmatory Factor Analysis 12 Dimensions with*

*Standardized Estimates and Standard Errors*

<table>
<thead>
<tr>
<th>Tech By</th>
<th>Standardized Estimate</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q30</td>
<td>0.76</td>
<td>0.00</td>
</tr>
<tr>
<td>Q31</td>
<td>0.74</td>
<td>0.04</td>
</tr>
<tr>
<td>Q32</td>
<td>0.81</td>
<td>0.05</td>
</tr>
<tr>
<td>Q33</td>
<td>0.81</td>
<td>0.04</td>
</tr>
<tr>
<td>Q34</td>
<td>0.78</td>
<td>0.04</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Div By</th>
<th>Standardized Estimate</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q35</td>
<td>0.66</td>
<td>0.00</td>
</tr>
<tr>
<td>Q36</td>
<td>0.60</td>
<td>0.04</td>
</tr>
<tr>
<td>Q37</td>
<td>0.59</td>
<td>0.05</td>
</tr>
<tr>
<td>Q38</td>
<td>0.63</td>
<td>0.04</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ethics By</th>
<th>Standardized Estimate</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q39</td>
<td>0.62</td>
<td>0.00</td>
</tr>
<tr>
<td>Q40</td>
<td>0.75</td>
<td>0.06</td>
</tr>
<tr>
<td>Q41</td>
<td>0.78</td>
<td>0.06</td>
</tr>
<tr>
<td>Q42</td>
<td>0.74</td>
<td>0.06</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Active By</th>
<th>Standardized Estimate</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q43</td>
<td>0.60</td>
<td>0.00</td>
</tr>
<tr>
<td>Q44</td>
<td>0.77</td>
<td>0.08</td>
</tr>
<tr>
<td>Q45</td>
<td>0.63</td>
<td>0.07</td>
</tr>
</tbody>
</table>
Table 9 continued

*Model Results for Confirmatory Factor Analysis 12 Dimensions with Standardized Estimates and Standard Errors*

<table>
<thead>
<tr>
<th>Variances</th>
<th>Standardized Estimate</th>
<th>Standard Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn</td>
<td>0.18</td>
<td>0.02</td>
</tr>
<tr>
<td>Enthus</td>
<td>0.33</td>
<td>0.02</td>
</tr>
<tr>
<td>Clarity</td>
<td>0.24</td>
<td>0.02</td>
</tr>
<tr>
<td>Rapport</td>
<td>0.44</td>
<td>0.04</td>
</tr>
<tr>
<td>Group</td>
<td>0.66</td>
<td>0.04</td>
</tr>
<tr>
<td>Breadth</td>
<td>0.47</td>
<td>0.03</td>
</tr>
<tr>
<td>Assign</td>
<td>0.63</td>
<td>0.04</td>
</tr>
<tr>
<td>Exam</td>
<td>0.30</td>
<td>0.02</td>
</tr>
<tr>
<td>Tech</td>
<td>0.58</td>
<td>0.04</td>
</tr>
<tr>
<td>Div</td>
<td>0.44</td>
<td>0.03</td>
</tr>
<tr>
<td>Ethics</td>
<td>0.39</td>
<td>0.03</td>
</tr>
<tr>
<td>Active</td>
<td>0.36</td>
<td>0.03</td>
</tr>
</tbody>
</table>
Table 10

*Correlation Matrix of 12 Dimensions (N=1047)*

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Enth</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Learn</td>
<td>.535</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Clarity</td>
<td>.637</td>
<td>.768</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Rapport</td>
<td>.607</td>
<td>.493</td>
<td>.623</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Group</td>
<td>.468</td>
<td>.394</td>
<td>.475</td>
<td>.668</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Breadth</td>
<td>.463</td>
<td>.520</td>
<td>.577</td>
<td>.621</td>
<td>.694</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Assign</td>
<td>.398</td>
<td>.593</td>
<td>.655</td>
<td>.460</td>
<td>.505</td>
<td>.595</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Exam</td>
<td>.514</td>
<td>.709</td>
<td>.780</td>
<td>.592</td>
<td>.458</td>
<td>.550</td>
<td>.708</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Tech</td>
<td>.353</td>
<td>.305</td>
<td>.506</td>
<td>.557</td>
<td>.474</td>
<td>.569</td>
<td>.471</td>
<td>.469</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Divers</td>
<td>.508</td>
<td>.616</td>
<td>.669</td>
<td>.657</td>
<td>.537</td>
<td>.551</td>
<td>.534</td>
<td>.734</td>
<td>.458</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Ethics</td>
<td>.475</td>
<td>.571</td>
<td>.617</td>
<td>.625</td>
<td>.589</td>
<td>.729</td>
<td>.597</td>
<td>.622</td>
<td>.614</td>
<td>.720</td>
<td>1.00</td>
</tr>
<tr>
<td>12.</td>
<td>Active</td>
<td>.454</td>
<td>.479</td>
<td>.490</td>
<td>.572</td>
<td>.570</td>
<td>.568</td>
<td>.498</td>
<td>.517</td>
<td>.518</td>
<td>.517</td>
<td>.587</td>
</tr>
</tbody>
</table>

Note: Enth = Enthusiasm, Learn = Learning, Assign = Assignments, Tech = Technology, Divers = Diversity, Active = Active Learning.
### Table 11

*Top 10 Modification Indices for Factor Loadings of the CFA (12 Dimension Model)*

<table>
<thead>
<tr>
<th>M.I. value</th>
<th>Question</th>
<th>Designated Loading</th>
<th>Secondary Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>140.38</td>
<td>8. The instructor’s style of presentation holds your interest during class.</td>
<td>Enthusiasm</td>
<td>Clarity</td>
</tr>
<tr>
<td>132.29</td>
<td>37. The instructor encourages discussion of diversity issues when appropriate to course content.</td>
<td>Diversity</td>
<td>Breadth</td>
</tr>
<tr>
<td>112.52</td>
<td>37. The instructor encourages discussion of diversity issues when appropriate to course content.</td>
<td>Diversity</td>
<td>Group</td>
</tr>
<tr>
<td>110.52</td>
<td>37. The instructor encourages discussion of diversity issues when appropriate to course content.</td>
<td>Diversity</td>
<td>Ethics</td>
</tr>
</tbody>
</table>
Table 11 continued

*Top 10 Modification Indices for Factor Loadings of the CFA (12 Dimension Model)*

<table>
<thead>
<tr>
<th>M.I. value</th>
<th>Question (Item) Number</th>
<th>Designated Loading</th>
<th>Secondary Loading</th>
</tr>
</thead>
<tbody>
<tr>
<td>107.02</td>
<td>12. The instructor gives lectures that facilitate note taking.</td>
<td>Organ/Clarity</td>
<td>Breadth</td>
</tr>
<tr>
<td>106.86</td>
<td>8. The instructor’s style of presentation holds your interest during class.</td>
<td>Enthusiasm</td>
<td>Learn</td>
</tr>
<tr>
<td>106.50</td>
<td>12. The instructor gives lectures that facilitate note taking.</td>
<td>Organ/Clarity</td>
<td>Technology</td>
</tr>
<tr>
<td>93.10</td>
<td>9. The instructor’s explanations are clear.</td>
<td>Organ/Clarity</td>
<td>Technology</td>
</tr>
<tr>
<td>85.60</td>
<td>37. The instructor encourages discussion of diversity issues when appropriate to course content.</td>
<td>Diversity</td>
<td>Technology</td>
</tr>
<tr>
<td>79.70</td>
<td>19. Students are encouraged to ask questions and are given meaningful answers.</td>
<td>Group</td>
<td>Exam</td>
</tr>
</tbody>
</table>
Table 12

*Top 10 Modification Indices for Covariances of Uniquenesses (12 Dimension Model)*

<table>
<thead>
<tr>
<th>Pair Number</th>
<th>M.I. value</th>
<th>Question (Item) Number</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>302.78</td>
<td>31. The technology used in the course supports the goals of the class.</td>
<td>Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30. The instructor uses technology appropriately in the classroom.</td>
<td>Technology</td>
</tr>
<tr>
<td>2</td>
<td>191.70</td>
<td>33. Instructional resources on the World Wide Web are used to Promote student learning.</td>
<td>Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>32. Electronic communications (e.g., email, WebCT) is used to promote interaction and discussion.</td>
<td>Technology</td>
</tr>
</tbody>
</table>
Table 12 continued

*Top 10 Modification Indices for Covariances of Uniquenesses (12 Dimension Model)*

<table>
<thead>
<tr>
<th>Pair Number</th>
<th>M.I. value</th>
<th>Question (Item) Number</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>107.14</td>
<td>33. Instructional resources on the Technology World Wide Web are used to Promote student learning.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>107.14</td>
<td>31. The technology used in Technology the course supports the goals of the class.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>93.79</td>
<td>15. The instructor has a Rapport genuine interest in individual students.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>93.79</td>
<td>13. The instructor is friendly Rapport toward individual students.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>92.40</td>
<td>38. The instructor demonstrates Diversity respect for all students (e.g., not demeaning to either individuals or subgroups).</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>92.40</td>
<td>36. The instructor is fair and Diversity unbiased in his/her treatment of all students.</td>
<td></td>
</tr>
</tbody>
</table>
Table 12 continued

*Top 10 Modification Indices for Covariances of Uniquenesses (12 Dimension Model)*

<table>
<thead>
<tr>
<th>Pair Number</th>
<th>M.I. value</th>
<th>Question (Item) Number</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>80.27</td>
<td>9. The instructor’s explanations are clear.</td>
<td>Organ/Clarity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. You are able to learn and understand the subject materials in the course.</td>
<td>Learning</td>
</tr>
<tr>
<td>7</td>
<td>77.43</td>
<td>18. Students are invited to share their ideas and knowledge.</td>
<td>Group</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17. Students are encouraged to participate in class discussions.</td>
<td>Group</td>
</tr>
<tr>
<td>8</td>
<td>72.87</td>
<td>33. Instructional resources on the World Wide Web are used to Promote student learning.</td>
<td>Technology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30. The instructor uses technology appropriately in the classroom.</td>
<td>Technology</td>
</tr>
<tr>
<td>Pair Number</td>
<td>M.I. value</td>
<td>Question (Item) Number</td>
<td>Dimension</td>
</tr>
<tr>
<td>-------------</td>
<td>------------</td>
<td>-------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>9</td>
<td>65.01</td>
<td>6. The instructor is dynamic and energetic in conducting the course.</td>
<td>Enthusiasm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5. The instructor is enthusiastic about teaching the course.</td>
<td>Enthusiasm</td>
</tr>
<tr>
<td>10</td>
<td>63.79</td>
<td>12. The instructor gives lectures that facilitates note taking.</td>
<td>Organ/Clarity</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. The instructor’s explanations are clear.</td>
<td>Organ/Clarity</td>
</tr>
</tbody>
</table>
Table 13

Standardized Coefficients (Beta) Results by Dimension

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Learning</th>
<th>Enthusiasm</th>
<th>Clarity</th>
<th>Rapport</th>
<th>Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male¹</td>
<td>.097**</td>
<td>.042</td>
<td>.115*</td>
<td>.069*</td>
<td>.072*</td>
</tr>
<tr>
<td>Age</td>
<td>.090*</td>
<td>-.009</td>
<td>.098*</td>
<td>.012</td>
<td>-.003</td>
</tr>
<tr>
<td>Sem Hr.</td>
<td>.034</td>
<td>.024</td>
<td>-.022</td>
<td>-.012</td>
<td>.005</td>
</tr>
<tr>
<td>Employ</td>
<td>.038</td>
<td>.005</td>
<td>.012</td>
<td>.011</td>
<td>.006</td>
</tr>
<tr>
<td>Afam²</td>
<td>-.027</td>
<td>.006</td>
<td>.078*</td>
<td>.041</td>
<td>.064*</td>
</tr>
<tr>
<td>Hispan²</td>
<td>.007</td>
<td>.015</td>
<td>.083**</td>
<td>.001</td>
<td>.033</td>
</tr>
<tr>
<td>Natam²</td>
<td>-.084*</td>
<td>.023</td>
<td>.010</td>
<td>-.039</td>
<td>.017</td>
</tr>
<tr>
<td>Other²</td>
<td>.059</td>
<td>.080*</td>
<td>.039</td>
<td>.027</td>
<td>.035</td>
</tr>
<tr>
<td>Terminal³</td>
<td>-.012</td>
<td>-.009</td>
<td>.016</td>
<td>.004</td>
<td>-.003</td>
</tr>
<tr>
<td>Personal³</td>
<td>.022</td>
<td>.020</td>
<td>-.026</td>
<td>-.001</td>
<td>-.016</td>
</tr>
<tr>
<td>Certif³</td>
<td>.013</td>
<td>-.028</td>
<td>-.008</td>
<td>-.025</td>
<td>-.045</td>
</tr>
<tr>
<td>Career³</td>
<td>-.002</td>
<td>.012</td>
<td>.018</td>
<td>-.025</td>
<td>.007</td>
</tr>
<tr>
<td>Univ³</td>
<td>-.001</td>
<td>.003</td>
<td>-.001</td>
<td>.011</td>
<td>-.005</td>
</tr>
</tbody>
</table>

R²  | .034 | .010 | .028 | .010 | .014 |

Reference: Female¹ (Gender); Caucasian² (Ethnicity); and AA- continue to Four year³ (Reason).

* p < .05. ** p < .01.
Table 13 continued

Standardized Coefficients (Beta) Results by Dimension

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Breadth</th>
<th>Assignment</th>
<th>Exam</th>
<th>Technology</th>
<th>Diverse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>-.002</td>
<td>.134**</td>
<td>.108**</td>
<td>.000</td>
<td>.131**</td>
</tr>
<tr>
<td>Age</td>
<td>.052</td>
<td>.094**</td>
<td>.049</td>
<td>.080*</td>
<td>.066*</td>
</tr>
<tr>
<td>Sem Hr.</td>
<td>.069*</td>
<td>-.002</td>
<td>-.044</td>
<td>-.024</td>
<td>.005</td>
</tr>
<tr>
<td>Employ</td>
<td>.035</td>
<td>.013</td>
<td>.050</td>
<td>.028</td>
<td>.044</td>
</tr>
<tr>
<td>Afam</td>
<td>.069*</td>
<td>.011</td>
<td>-.035</td>
<td>.091**</td>
<td>.005</td>
</tr>
<tr>
<td>Hispan</td>
<td>.018</td>
<td>-.011</td>
<td>.013</td>
<td>.071*</td>
<td>.050</td>
</tr>
<tr>
<td>Natam</td>
<td>-.026</td>
<td>.008</td>
<td>-.043</td>
<td>-.011</td>
<td>-.029</td>
</tr>
<tr>
<td>Other</td>
<td>.069*</td>
<td>.023</td>
<td>-.039</td>
<td>.026</td>
<td>.054</td>
</tr>
<tr>
<td>Terminal</td>
<td>.007</td>
<td>-.001</td>
<td>-.040</td>
<td>.048</td>
<td>-.020</td>
</tr>
<tr>
<td>Personal</td>
<td>.005</td>
<td>-.013</td>
<td>-.019</td>
<td>-.064*</td>
<td>-.009</td>
</tr>
<tr>
<td>Certif</td>
<td>-.075*</td>
<td>-.021</td>
<td>-.005</td>
<td>-.041</td>
<td>-.024</td>
</tr>
<tr>
<td>Career</td>
<td>.007</td>
<td>.024</td>
<td>-.011</td>
<td>.028</td>
<td>-.007</td>
</tr>
<tr>
<td>Univ</td>
<td>-.017</td>
<td>.003</td>
<td>-.002</td>
<td>-.014</td>
<td>-.010</td>
</tr>
</tbody>
</table>

$R^2$       | .026    | .030       | .022  | .030       | .031    |

Reference: Female¹ (Gender); Caucasian² (Ethnicity); and AA- continue to Four year³ (Reason).

* p < .05. ** p < .01.
Table 13 continued

Standardized Coefficients (Beta) Results by Dimension

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Ethics</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>.061</td>
<td>.092**</td>
</tr>
<tr>
<td>Age</td>
<td>.102**</td>
<td>-.068*</td>
</tr>
<tr>
<td>Sem Hr.</td>
<td>.022</td>
<td>-.017</td>
</tr>
<tr>
<td>Employ</td>
<td>.035</td>
<td>.009</td>
</tr>
<tr>
<td>Afam</td>
<td>.009</td>
<td>.009</td>
</tr>
<tr>
<td>Hispan</td>
<td>.024</td>
<td>.081**</td>
</tr>
<tr>
<td>Natam</td>
<td>-.009</td>
<td>-.010</td>
</tr>
<tr>
<td>Other</td>
<td>.012</td>
<td>.065*</td>
</tr>
<tr>
<td>Terminal</td>
<td>.014</td>
<td>-.013</td>
</tr>
<tr>
<td>Personal</td>
<td>-.045</td>
<td>-.030</td>
</tr>
<tr>
<td>Certif</td>
<td>-.065*</td>
<td>-.047</td>
</tr>
<tr>
<td>Career</td>
<td>.043</td>
<td>.044</td>
</tr>
<tr>
<td>Univ</td>
<td>-.030</td>
<td>.035</td>
</tr>
</tbody>
</table>

$R^2$ | .029 | .031

Reference: Female¹ (Gender); Caucasian² (Ethnicity); and AA- continue to Four year³ (Reason).

* p < .05. ** p < .01.
Table 14

*Descriptive Statistics for Predictor Variable Age for Dimension Learn*

<table>
<thead>
<tr>
<th>Group</th>
<th>Age Range</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>17 – 22</td>
<td>766</td>
<td>4.09</td>
<td>0.60</td>
</tr>
<tr>
<td>2</td>
<td>23 – 27</td>
<td>110</td>
<td>4.24</td>
<td>0.61</td>
</tr>
<tr>
<td>3</td>
<td>28 – 33</td>
<td>71</td>
<td>4.39</td>
<td>0.48</td>
</tr>
<tr>
<td>4</td>
<td>34 – 39</td>
<td>44</td>
<td>4.10</td>
<td>0.62</td>
</tr>
<tr>
<td>5</td>
<td>40 – 45</td>
<td>28</td>
<td>4.18</td>
<td>0.54</td>
</tr>
<tr>
<td>6</td>
<td>46 – 51</td>
<td>18</td>
<td>4.23</td>
<td>0.45</td>
</tr>
<tr>
<td>7</td>
<td>52 – 77</td>
<td>10</td>
<td>4.60</td>
<td>0.46</td>
</tr>
</tbody>
</table>
Table 15

*Descriptive Statistics for Learning by Ethnicity*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>37</td>
<td>4.05</td>
<td>0.70</td>
</tr>
<tr>
<td>Caucasian</td>
<td>871</td>
<td>4.14</td>
<td>0.59</td>
</tr>
<tr>
<td>Hispanic</td>
<td>70</td>
<td>4.16</td>
<td>0.56</td>
</tr>
<tr>
<td>Native American</td>
<td>12</td>
<td>3.68</td>
<td>0.56</td>
</tr>
<tr>
<td>Other</td>
<td>57</td>
<td>4.28</td>
<td>0.56</td>
</tr>
</tbody>
</table>
Table 16

*Descriptive Statistics for Enthusiasm by Ethnicity*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>37</td>
<td>4.25</td>
<td>0.52</td>
</tr>
<tr>
<td>Caucasian</td>
<td>871</td>
<td>4.23</td>
<td>0.66</td>
</tr>
<tr>
<td>Hispanic</td>
<td>70</td>
<td>4.27</td>
<td>0.61</td>
</tr>
<tr>
<td>Native American</td>
<td>12</td>
<td>4.37</td>
<td>0.71</td>
</tr>
<tr>
<td>Other</td>
<td>57</td>
<td>4.45</td>
<td>0.53</td>
</tr>
</tbody>
</table>
Table 17

*Descriptive Statistics for Clarity by Age*

<table>
<thead>
<tr>
<th>Group</th>
<th>Age Range</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>17 – 22</td>
<td>766</td>
<td>4.04</td>
<td>0.63</td>
</tr>
<tr>
<td>2</td>
<td>23 – 27</td>
<td>110</td>
<td>4.15</td>
<td>0.58</td>
</tr>
<tr>
<td>3</td>
<td>28 – 33</td>
<td>71</td>
<td>4.31</td>
<td>0.48</td>
</tr>
<tr>
<td>4</td>
<td>34 – 39</td>
<td>44</td>
<td>4.06</td>
<td>0.60</td>
</tr>
<tr>
<td>5</td>
<td>40 – 45</td>
<td>28</td>
<td>4.18</td>
<td>0.51</td>
</tr>
<tr>
<td>6</td>
<td>46 – 51</td>
<td>18</td>
<td>4.25</td>
<td>0.49</td>
</tr>
<tr>
<td>7</td>
<td>52 – 77</td>
<td>10</td>
<td>4.27</td>
<td>0.27</td>
</tr>
</tbody>
</table>
Table 18

*Descriptive Statistics for Clarity by Ethnicity*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>37</td>
<td>4.32</td>
<td>0.54</td>
</tr>
<tr>
<td>Caucasian</td>
<td>871</td>
<td>4.05</td>
<td>0.62</td>
</tr>
<tr>
<td>Hispanic</td>
<td>70</td>
<td>4.28</td>
<td>0.52</td>
</tr>
<tr>
<td>Native American</td>
<td>12</td>
<td>3.13</td>
<td>0.46</td>
</tr>
<tr>
<td>Other</td>
<td>57</td>
<td>4.15</td>
<td>0.53</td>
</tr>
</tbody>
</table>
Table 19

*Descriptive Statistics for Group by Ethnicity*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>37</td>
<td>4.19</td>
<td>0.62</td>
</tr>
<tr>
<td>Caucasian</td>
<td>871</td>
<td>3.91</td>
<td>0.80</td>
</tr>
<tr>
<td>Hispanic</td>
<td>70</td>
<td>4.04</td>
<td>0.56</td>
</tr>
<tr>
<td>Native American</td>
<td>12</td>
<td>4.02</td>
<td>0.70</td>
</tr>
<tr>
<td>Other</td>
<td>57</td>
<td>4.02</td>
<td>0.58</td>
</tr>
</tbody>
</table>
Table 20

*Descriptive Statistics for Breadth by Ethnicity*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>37</td>
<td>3.99</td>
<td>0.68</td>
</tr>
<tr>
<td>Caucasian</td>
<td>871</td>
<td>3.76</td>
<td>0.73</td>
</tr>
<tr>
<td>Hispanic</td>
<td>70</td>
<td>3.79</td>
<td>0.85</td>
</tr>
<tr>
<td>Native American</td>
<td>12</td>
<td>3.54</td>
<td>0.50</td>
</tr>
<tr>
<td>Other</td>
<td>57</td>
<td>4.00</td>
<td>0.70</td>
</tr>
</tbody>
</table>
Table 21

*Descriptive Statistics for Breadth by Semester Hours*

<table>
<thead>
<tr>
<th>Group</th>
<th>Hours</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Less than 12</td>
<td>472</td>
<td>3.72</td>
<td>0.74</td>
</tr>
<tr>
<td>2</td>
<td>13 - 24</td>
<td>189</td>
<td>3.80</td>
<td>0.67</td>
</tr>
<tr>
<td>3</td>
<td>25 - 36</td>
<td>153</td>
<td>3.74</td>
<td>0.84</td>
</tr>
<tr>
<td>4</td>
<td>37 - 48</td>
<td>101</td>
<td>3.99</td>
<td>0.67</td>
</tr>
<tr>
<td>5</td>
<td>49 hours or more</td>
<td>132</td>
<td>3.86</td>
<td>0.68</td>
</tr>
</tbody>
</table>
Table 22

*Descriptive Statistics for Breadth by Reason for Attendance*

<table>
<thead>
<tr>
<th>Group</th>
<th>Reason</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Terminal AA or AS</td>
<td>169</td>
<td>3.81</td>
<td>0.70</td>
</tr>
<tr>
<td>2</td>
<td>Four-year</td>
<td>798</td>
<td>3.76</td>
<td>0.67</td>
</tr>
<tr>
<td>3</td>
<td>Personal</td>
<td>26</td>
<td>3.73</td>
<td>0.81</td>
</tr>
<tr>
<td>4</td>
<td>Certificate</td>
<td>23</td>
<td>3.40</td>
<td>1.02</td>
</tr>
<tr>
<td>5</td>
<td>Upgrade</td>
<td>10</td>
<td>3.86</td>
<td>0.66</td>
</tr>
<tr>
<td>6</td>
<td>University</td>
<td>21</td>
<td>3.73</td>
<td>0.79</td>
</tr>
</tbody>
</table>
### Table 23

*Descriptive Statistics for Assignment by Age*

<table>
<thead>
<tr>
<th>Group</th>
<th>Age Range</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>17 – 22</td>
<td>766</td>
<td>3.89</td>
<td>0.91</td>
</tr>
<tr>
<td>2</td>
<td>23 – 27</td>
<td>110</td>
<td>4.10</td>
<td>0.80</td>
</tr>
<tr>
<td>3</td>
<td>28 – 33</td>
<td>71</td>
<td>4.20</td>
<td>0.89</td>
</tr>
<tr>
<td>4</td>
<td>34 – 39</td>
<td>44</td>
<td>4.02</td>
<td>0.69</td>
</tr>
<tr>
<td>5</td>
<td>40 – 45</td>
<td>28</td>
<td>4.21</td>
<td>0.83</td>
</tr>
<tr>
<td>6</td>
<td>46 – 51</td>
<td>18</td>
<td>4.27</td>
<td>0.69</td>
</tr>
<tr>
<td>7</td>
<td>52 – 77</td>
<td>10</td>
<td>3.95</td>
<td>1.14</td>
</tr>
</tbody>
</table>
Table 24

*Descriptive Statistics for Technology by Age*

<table>
<thead>
<tr>
<th>Group</th>
<th>Age Range</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>17 – 22</td>
<td>766</td>
<td>3.30</td>
<td>0.85</td>
</tr>
<tr>
<td>2</td>
<td>23 – 27</td>
<td>110</td>
<td>3.48</td>
<td>0.90</td>
</tr>
<tr>
<td>3</td>
<td>28 – 33</td>
<td>71</td>
<td>3.55</td>
<td>0.82</td>
</tr>
<tr>
<td>4</td>
<td>34 – 39</td>
<td>44</td>
<td>3.34</td>
<td>0.84</td>
</tr>
<tr>
<td>5</td>
<td>40 – 45</td>
<td>28</td>
<td>3.37</td>
<td>0.72</td>
</tr>
<tr>
<td>6</td>
<td>46 – 51</td>
<td>18</td>
<td>3.45</td>
<td>0.81</td>
</tr>
<tr>
<td>7</td>
<td>52 – 77</td>
<td>10</td>
<td>3.78</td>
<td>0.89</td>
</tr>
</tbody>
</table>
Table 25

*Descriptive Statistics for Technology by Ethnicity*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>37</td>
<td>3.73</td>
<td>0.63</td>
</tr>
<tr>
<td>Caucasian</td>
<td>871</td>
<td>3.32</td>
<td>0.85</td>
</tr>
<tr>
<td>Hispanic</td>
<td>70</td>
<td>3.56</td>
<td>0.77</td>
</tr>
<tr>
<td>Native American</td>
<td>12</td>
<td>3.23</td>
<td>0.58</td>
</tr>
<tr>
<td>Other</td>
<td>57</td>
<td>3.43</td>
<td>0.93</td>
</tr>
</tbody>
</table>
Table 26

*Descriptive Statistics for Technology by Reason for Attendance*

<table>
<thead>
<tr>
<th>Group</th>
<th>Reason</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Terminal AA or AS</td>
<td>169</td>
<td>3.48</td>
<td>0.83</td>
</tr>
<tr>
<td>2</td>
<td>Four-year</td>
<td>798</td>
<td>3.35</td>
<td>0.85</td>
</tr>
<tr>
<td>3</td>
<td>Personal</td>
<td>26</td>
<td>2.97</td>
<td>0.80</td>
</tr>
<tr>
<td>4</td>
<td>Certificate</td>
<td>23</td>
<td>3.15</td>
<td>0.78</td>
</tr>
<tr>
<td>5</td>
<td>Upgrade</td>
<td>10</td>
<td>3.66</td>
<td>1.29</td>
</tr>
<tr>
<td>6</td>
<td>University</td>
<td>21</td>
<td>3.23</td>
<td>0.76</td>
</tr>
</tbody>
</table>
Table 27

*Descriptive Statistics for Diversity by Age*

<table>
<thead>
<tr>
<th>Group</th>
<th>Age Range</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>17 – 22</td>
<td>766</td>
<td>4.27</td>
<td>0.74</td>
</tr>
<tr>
<td>2</td>
<td>23 – 27</td>
<td>110</td>
<td>4.38</td>
<td>0.55</td>
</tr>
<tr>
<td>3</td>
<td>28 – 33</td>
<td>71</td>
<td>4.42</td>
<td>0.66</td>
</tr>
<tr>
<td>4</td>
<td>34 – 39</td>
<td>44</td>
<td>4.32</td>
<td>0.63</td>
</tr>
<tr>
<td>5</td>
<td>40 – 45</td>
<td>28</td>
<td>4.36</td>
<td>0.66</td>
</tr>
<tr>
<td>6</td>
<td>46 – 51</td>
<td>18</td>
<td>4.30</td>
<td>0.56</td>
</tr>
<tr>
<td>7</td>
<td>52 – 77</td>
<td>10</td>
<td>4.67</td>
<td>0.24</td>
</tr>
</tbody>
</table>
Table 28

Descriptive Statistics for Ethics by Age

<table>
<thead>
<tr>
<th>Group</th>
<th>Age Range</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>17 – 22</td>
<td>766</td>
<td>3.90</td>
<td>0.80</td>
</tr>
<tr>
<td>2</td>
<td>23 – 27</td>
<td>110</td>
<td>4.09</td>
<td>0.79</td>
</tr>
<tr>
<td>3</td>
<td>28 – 33</td>
<td>71</td>
<td>4.16</td>
<td>0.61</td>
</tr>
<tr>
<td>4</td>
<td>34 – 39</td>
<td>44</td>
<td>4.14</td>
<td>0.69</td>
</tr>
<tr>
<td>5</td>
<td>40 – 45</td>
<td>28</td>
<td>4.09</td>
<td>0.78</td>
</tr>
<tr>
<td>6</td>
<td>46 – 51</td>
<td>18</td>
<td>4.11</td>
<td>0.64</td>
</tr>
<tr>
<td>7</td>
<td>52 – 77</td>
<td>10</td>
<td>4.27</td>
<td>0.64</td>
</tr>
</tbody>
</table>
Table 29

Descriptive Statistics for Ethics by Reason for Attendance

<table>
<thead>
<tr>
<th>Group</th>
<th>Reason</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AA or AS</td>
<td>169</td>
<td>4.02</td>
<td>0.80</td>
</tr>
<tr>
<td>2</td>
<td>Four-year</td>
<td>798</td>
<td>3.97</td>
<td>0.77</td>
</tr>
<tr>
<td>3</td>
<td>Personal</td>
<td>26</td>
<td>3.70</td>
<td>0.81</td>
</tr>
<tr>
<td>4</td>
<td>Certificate</td>
<td>23</td>
<td>3.65</td>
<td>1.05</td>
</tr>
<tr>
<td>5</td>
<td>Upgrade</td>
<td>10</td>
<td>3.83</td>
<td>0.80</td>
</tr>
<tr>
<td>6</td>
<td>University</td>
<td>21</td>
<td>3.97</td>
<td>0.79</td>
</tr>
</tbody>
</table>
Table 30

*Descriptive Statistics for Active Learning by Age*

<table>
<thead>
<tr>
<th>Group</th>
<th>Age Range</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>17 – 22</td>
<td>766</td>
<td>3.66</td>
<td>0.84</td>
</tr>
<tr>
<td>2</td>
<td>23 – 27</td>
<td>110</td>
<td>3.71</td>
<td>0.80</td>
</tr>
<tr>
<td>3</td>
<td>28 – 33</td>
<td>71</td>
<td>3.64</td>
<td>0.82</td>
</tr>
<tr>
<td>4</td>
<td>34 – 39</td>
<td>44</td>
<td>3.32</td>
<td>0.74</td>
</tr>
<tr>
<td>5</td>
<td>40 – 45</td>
<td>28</td>
<td>3.37</td>
<td>0.65</td>
</tr>
<tr>
<td>6</td>
<td>46 – 51</td>
<td>18</td>
<td>3.42</td>
<td>0.89</td>
</tr>
<tr>
<td>7</td>
<td>52 – 77</td>
<td>10</td>
<td>3.83</td>
<td>0.83</td>
</tr>
</tbody>
</table>
Table 31

*Descriptive Statistics for Active Learning by Ethnicity*

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>n</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>37</td>
<td>3.65</td>
<td>0.74</td>
</tr>
<tr>
<td>Caucasian</td>
<td>871</td>
<td>3.61</td>
<td>0.82</td>
</tr>
<tr>
<td>Hispanic</td>
<td>70</td>
<td>3.90</td>
<td>0.94</td>
</tr>
<tr>
<td>Native American</td>
<td>12</td>
<td>3.58</td>
<td>0.93</td>
</tr>
<tr>
<td>Other</td>
<td>57</td>
<td>3.85</td>
<td>0.80</td>
</tr>
</tbody>
</table>
Table 32

Summary of Predictor Variables for each dimension

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Learning</th>
<th>Enthusiasm</th>
<th>Clarity</th>
<th>Rapport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female &gt; Male</td>
<td></td>
<td>Female &gt; Male</td>
<td>Female &gt; Male</td>
</tr>
<tr>
<td>Age</td>
<td>Older &gt; Younger</td>
<td>Older &gt; Younger</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Caucasian &gt; Native Am</td>
<td>Other &gt; Caucasian</td>
<td>African AM &gt; Caucasian</td>
<td>Hispanic &gt; Caucasian</td>
</tr>
</tbody>
</table>

Reason

Semester Hours

Employment
Table 32 continued

Summary of Predictor Variables for each dimension

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Breadth</th>
<th>Assignment</th>
<th>Examination</th>
<th>Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td>Female &gt; Male</td>
<td>Female &gt; Male</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>Older &gt; Younger</td>
<td></td>
<td>Older &gt; Younger</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>African Am &gt; Caucasian</td>
<td></td>
<td>African Am &gt; Caucasian</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hispanic &gt; Caucasian</td>
<td></td>
<td>Hispanic &gt; Caucasian</td>
<td></td>
</tr>
<tr>
<td>Reason</td>
<td>AA – Four year &gt; Certificate</td>
<td></td>
<td>AA – Four year &gt; Personal</td>
<td></td>
</tr>
<tr>
<td>Semester Hours</td>
<td>37 to 48 &gt; less than 12 hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 32 continued

Summary of Predictor Variables for each dimension

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Diversity</th>
<th>Ethics</th>
<th>Active Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female &gt; Male</td>
<td>Female &gt; Male</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Older &gt; Younger</td>
<td>Older &gt; Younger</td>
<td>Older &gt; Younger</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
<td>Hispanic &gt; Caucasian</td>
</tr>
<tr>
<td>Reason</td>
<td>AA- Four year &gt; Certificate</td>
<td>Other &gt; Caucasian</td>
<td></td>
</tr>
<tr>
<td>Semester Hours</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure Caption

Figure 1. Measurement model underlying the structure of teaching excellence (Eight dimensions).
Figure 2. Measurement model underlying the structure of teaching excellence (12 dimensions).
Figure 3. Diagram of standardized estimates and standard errors (8 dimensions)
Figure Caption

Figure 4. Frequency graph of model modification indices (BY Statements) for 8 dimensions
Modification Index

Frequency of indices
Figure Caption

Figure 5. Frequency graph of model modification indices (WITH Statements) for 8 dimensions
Modification Index

Frequency of indices
Figure Caption

Figure 6. Diagram of Standardized estimates and standard errors (12 dimensions)
Figure Caption

Figure 7. Frequency graph of model modification indices (BY Statements) for 12 dimensions
Figure Caption

Figure 8. Frequency graph of model modification indices (WITH Statements) for 12 dimensions
About the Author

Gary Robert Oesch received an Associates Degree from Pasco-Hernando Community College in 1980. He was awarded a Bachelor’s Degree in Psychology from the University of South Florida in 1982. He earned a Master’s Degree in Psychology from the University of West Florida, in 1986. He is currently an Assistant Professor of Psychology and Education at Pasco-Hernando Community College in Dade City, Florida. Prior to his present position, he worked as a Psychological Specialist with the Florida Department of Corrections, as well as an adjunct faculty member at Pasco-Hernando Community College. He is married with one daughter and current resides in Zephyrhills, Florida.