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2009

ABSTRACT

A Survey of Community College Faculty, Their Teaching Methodologies, and Congruence with Student Learning Needs

by

Susan J. Campbell

M.B.A., Arizona State University, 1999
B.S., Northern Arizona University, 1988

Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy
Education

Walden University
May 2009

ABSTRACT

National movements for greater quality in education have increased concerns about student learning and the effectiveness of teaching for the community college. Faculty are responsible for student learning, yet criticized for using ineffective teaching methods despite limited data on community college teaching practices. The purpose of this study was to gain a descriptive understanding of current teaching practices in three community colleges. This single-phase study used a concurrent mixed-method exploratory research design. A purposeful sample of 185 community college faculty across three colleges in the southwestern United States were surveyed about what methods they use, how they perceive their teaching effectiveness, what motivates them to change, and why they teach as they do. This study was grounded in the framework of Bandura's self-efficacy theory to enhance an understanding of the faculty's perspective of improving teaching and learning. Descriptive statistics and inductive analysis of mixed-method data led to key findings indicating that faculty were incorporating diverse and learner-centered strategies and using a variety of assessment methods. Despite feeling that good teaching is not rewarded by their colleges, faculty found participating in professional development and trying new methods beneficial to their teaching. The data indicated that better ways to evaluate teaching effectiveness are needed, along with better ways to evaluate student success at community colleges. This study benefits students, faculty, and community colleges nationally by providing research data to help inform and encourage administrative vision, support, and policies relating to faculty development and learner-centered programs to increase student engagement and success.

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DEDICATION

This dissertation is dedicated to my husband, Steve, who supports me unconditionally and always cheers me on; to my father, who did not get the chance to see this accomplishment; and to my mother, who has been there to listen throughout this chapter of my life.

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CHAPTER 1:

INTRODUCTION TO THE STUDY

Introduction

Competing views on the best method of instruction have existed since Plato (Burgan, 2006). During the past 3 decades, national concerns about instruction, teaching effectiveness, and student learning have been increasing substantially for community colleges, causing the current debate over the teaching and learning process. Movements for increased quality in higher education during the 1980s sparked national education summits calling for increased instructor accountability, improved assessment procedures, and reform movements on teaching and learning (Banta, 2002; O'Banion, 1997, 1999). The 1990s brought about a strong national movement urging colleges to shift their focus from teaching to learning (Barr & Tagg, 1995; Hanson, 2006; O'Banion, 1999), which is still in effect in 2009. Additionally, national calls for accountability measures and college-level outcomes assessment have been increasing in the first decade of the 21st century (Alfred, Shults, & Seybert, 2007; Cohen & Brawer, 2003; Mellow & Heelan, 2008).

While educational needs have changed in the 21st century, O'Banion (1997) argued that schools are still bound by time, place, and role restrictions created at the end of the 19th century. According to O'Banion, education must make a radical shift from an institution that was designed to serve an agrarian society, with a bureaucratic structure added during the industrial revolution, to an institution that educates based on the information age. Johnson (2006) alleged that the policies, ideas, and assumptions

within which schools operate inhibit evolution for community colleges. O'Banion (1997, 1999), Johnson (2006), Ayers (2006), and Phillippe and Sullivan (2005) all stated that a new institutional model is needed that provides greater flexibility, fewer boundaries, and more varied structures to best educate the students of today.

As community colleges have attempted to better meet student needs and become more *learner-centered*, they have incorporated principles of the learning organization as described by Peter Senge (1990). Senge stressed that to become a learning organization requires the incorporation of new mental models, one of which is moving from a focus on teaching to learning. Another critical mental model is systems thinking, which implies that a change to one area or unit of a community college will impact the entire institutional system. With the concept of systems thinking in mind, to make a change from a teaching paradigm to a learning paradigm or to develop a more learner-centered campus will require the support and commitment of all members of a campus (Kuh, Kinzie, Schuh, & Whitt, 2005; Mellow & Heelan, 2008; O'Banion, 1999). Since faculty constitute the front line responsible for student learning, a learner-centered approach demands a shift in the role of teachers, from one who imparts wisdom to a facilitator of learning (O'Banion, 1997). To make this shift successful requires understanding who the student population is, how those students learn, and what faculty are doing to ensure learning.

The 2007 Community College Survey of Student Engagement (CCSSE) identified that community colleges "enroll disproportionate numbers of students from low-income and other historically underserved backgrounds – many of whom are underprepared for college-work" (p. 2). Researchers have reported that 21st century students are diverse

individuals with varying learning needs that must be met in order for them to be successful and persist in the classroom (Brown, 2003; Cohen & Brawer, 2003; Mellow & Heelan, 2008; Phillipe & Sullivan, 2005). According to Phillipe and Sullivan, the average community college student is no longer a White male, 18-25 years of age, and attending on a full-time basis. The majority of students are adults over the age of 25, many of whom are seeking retraining or new career skills, and the number of women and minorities continues to increase. Yet faculty are not historically trained as educators and they are not rewarded to develop instructional excellence throughout their careers. Community college faculty are hired for their content expertise and are expected to know how to effectively apply the latest teaching methodologies to engage students and guide them to academic success (Barrington, 2004; Galbraith, 2004; Sperling, 2003). According to Eddy (2007) and Murray (2002), faculty are often unprepared for the pedagogical challenges of the diverse student population, which require different approaches to teaching and learning.

Many teaching methodologies and learning theories exist, but there is no one approach recognized as the best method for effective teaching and learning (Brown, 2003; Chickering, 2006; Erickson, Peters, & Strommer, 2006; Galbraith, 2004). Furthermore, some styles are claimed to be ineffective at meeting the learning needs of a diverse college student population (Barr & Tagg, 1995; Barrington, 2004; Smith & Ayers, 2006). The disconnect between teaching preparedness of varied methodologies and the diverse learning needs of students comes at a time when society is requiring increasingly complex skills of its members for them to be successful. Murray stated that effective teaching and learning in the community college classroom depends on a range

of teaching styles and flexibility among faculty to draw upon those teaching styles to meet the learning needs of a diverse student body. Faculty development programs with distinct goals to improve teaching and learning must be a part of the institutional mission.

The calls for accountability of community colleges and their faculty are the result of literature reporting data on the diverse learning styles and needs of students and recommendations of teaching methodologies designed to accommodate those needs. Many studies, however, were conducted in elementary and secondary schools where training of teachers is a component of employment (Burke & Dunn, 2003; Glover & Law, 2004; Wolfe, 2007). Postsecondary studies have been conducted, but primarily at the university level, where institutional goals and the college students are different from those of the community college (Cohen & Brawer, 2003; Chaves, 2006; Eddy, 2007; Hardy & Laanan, 2006; Kuh, Kinzie, Schuh, & Whitt, 2005). The United States lacks a national research agenda for community colleges and there are few educational researchers directing their attention towards community colleges even though more than 40% of America's college students attend community colleges (Cohen & Brawer, 2003; Kisker & Outcalt, 2005; Outcalt, 2002). Not suprisingly, while community college faculty are criticized for failing to educate (Conti, 2004; Long & Coldren, 2006), limited data exist on community college teaching practices and methods to motivate faculty to learn and implement new teaching methodologies when little training or support is provided. Isaac and Boyer (2007) noted that in reviewing the literature relative to community college issues, much is known about the students, but little is known about the faculty.

Problem Statement

National movements for increased quality in education over the past 3 decades have failed to demonstrate an increase in student learning, and concerns about teaching effectiveness have increased, especially within the community college (Chen & Hoshower, 2003; Johnson, 2006; Long & Coldren, 2006; O'Banion, 1997). Researchers have identified diverse and varying needs of 21st century students, along with teaching methodologies that are said to improve student learning. The problem this study addresses is that although data have been accumulated by researchers about students and their varying learning needs, few data exist on community college faculty, their teaching practices, and their understanding of teaching effectiveness (Isaac & Boyer, 2007; Sperling, 2003). This study facilitated the collection of information that provides descriptive data that not only depict what faculty are doing in the classroom but also an understanding of why.

Nature of the Study

Faculty are expected to be knowledgeable and proficient in the principles of teaching and in a diverse array of instructional methods to ensure that maximum learning can occur for all students (Brown, 2003; Mellow & Heelan, 2008). Additionally, faculty are challenged to be sensitive to the needs of their students. While research exists on learning theories and learning styles intended to improve student learning (Merriam, Caffarella, & Baumgartner, 2007; Sperling, 2003), community college faculty have minimal training in these learning theories and teaching methodologies to develop or refine their practice (Barrington, 2004; Cohen & Brawer, 2003). Moreover, research is

lacking on what is known about the teaching-learning process and actual community college classroom practice (Isaac & Boyer, 2007; Sperling, 2003).

This study examined a group of community college faculty for perceptions on their teaching methodologies and effectiveness on student learning. The investigation included views of their teaching styles, effectiveness in achieving student learning and retention, what they do to engage students, what motivates them to improve their teaching, and why they teach. Consistent with descriptive research, a survey was utilized to collect data. The survey consisted of closed and open-ended questions and data analysis consisted of descriptive statistics as well as qualitative analysis and interpretation, thus the mixed-method design. Since the data are descriptive and exploratory, hypothesis testing was not required (Johnson & Christensen, 2004). Gaining a descriptive understanding of faculty perceptions and perspectives aids in determining how to improve the learning process for student success and persistance. The research questions guiding this study were:

1. What teaching methods are community college faculty using in the classroom across several campuses within a large community college system in the southwestern United States?
2. How does this faculty evaluate student learning and their teaching effectiveness?
3. How does this faculty learn about the latest teaching and assessment methods, and what motivates them to do so?

The nature of this study and the research questions are discussed in more detail in chapter 3.

Purpose

The purpose of this single-phase, mixed-method survey study was to explore faculty teaching and learning activities and better understand their teaching behaviors. Some of these behaviors include how full-time faculty members learned about the teaching and learning process, what their perceptions are on aspects of their teaching methodologies and effectiveness on student learning, and how, as well as why, they teach as they do. While learning theories, diverse needs of students, and teaching effectiveness from the student or administrator perspective are reported in the literature, few studies have reported faculty self-perceived effectiveness and what they do to improve their teaching to enhance learning. The results of this study are intended to provide data based on faculty input that can assist community colleges in the improvement of the teaching and learning process as well as to influence policy on faculty development to improve teaching effectiveness, student learning, and retention.

The rationale for using a survey study that employs a mixed-method strategy was to gain an understanding of how faculty approach teaching and learning from both objective and subjective points of views (Johnson & Christensen, 2004; Kempner, 1992). There are a few quantitative studies on community college faculty teaching practices, which are addressed in chapter 2. These studies provide some data on what is happening among community college faculty and their teaching practices, but they do not provide an understanding of why faculty teach as they do or of what motivates faculty to change their teaching methods.

The perceived gap between teaching and learning is a multidimensional problem that cannot be explained by simple, linear concepts (Kempner, 1992). Kempner

described some of the issues in the scientific debate over methods, methodologies, and paradigms in educational research. He argued that a cultural perspective is central to understanding how knowledge is constructed, and without understanding the values of a culture, one may fail to understand the meaning behind their behavior. Kempner (1992) also stated that "theory based only on the premise of reducing human behavior and motive to variables amenable to statistical manipulation offers a limited perspective on human affairs" (p. 72).

This study employed mixed-methods questioning and analysis that helps to expand knowledge rather than reduce it. Both numeric and text input were collected. These data are descriptive, they take faculty culture into consideration, and they provide a rich and descriptive understanding of how faculty perceive their teaching style and effectiveness, what motivates them to change their teaching, as well as why they teach as they do.

Conceptual Framework

The conceptual framework that grounded this study was *self-efficacy*, the focus of social cognitive theory proposed by Albert Bandura. Self-efficacy informs the study about how instructors' beliefs in their own capabilities influence their level of performance and motivation to try new instructional methodologies. This theory holds that instructors with higher self-efficacy will be more likely to reflect on their instruction and set higher goals for themselves and their students and try harder to achieve those educational goals (Bandura, 1986; Ross & Bruce, 2007; Tucker et al., 2005). Applying this theory to the present study aids in understanding how faculty members' beliefs in

their ability to bring about student learning affect their willingness to reflect upon and change or improve their instructional techniques.

Self-efficacy can be evaluated in the form of *teacher efficacy. T*eacher efficacy is a self-perception, not an objective measure of teaching effectiveness (Ross & Bruce, 2007). Researchers have demonstrated, however, that teachers with high efficacy beliefs generate higher student success than do teachers with lower teacher efficacy (Goddard, Hoy, & Woofolk Hoy, 2004; Ross & Bruce, 2007; Tucker et al., 2005). According to Ross and Bruce's work, highly efficacious teachers reported on surveys and demonstrated in classroom observations a willingness to try new teaching ideas, to attend more closely to the needs of lower ability students, to modify students' perceptions of their own academic abilities, and to create greater academic success in the classroom. Teachers with higher efficacy were more likely to view student failure as an incentive for greater teacher effort rather than conclude that the student just could not learn. Ross and Bruce's study demonstrated that teacher efficacy impacted student efficacy, making students more enthusiastic about learning, and in turn, improving student achievement.

Based on their empirical work, Ross and Bruce (2007) developed a theory of teacher change. At the core of this theory is teacher self-assessment, in which teachers first observe their effect on student achievement, then make a judgment about how well they attained their instructional goals, and then reflect on how satisfied they are with their results. Self-assessment combined with knowledge of innovative instructional strategies heightens self-efficacy, which influences teacher goal setting and effort expenditure.

Operational Definitions

For the purpose of this study, the following operational definitions were used:

C*ourse*-a*ssessment:* learning about and evaluating oneself as an educator, as well as course content, the students, and the learning contexts (Dean, 2004, p. 94).

Learner-centered teaching: placing the learning characteristics of all learners first and creating a learning environment through a variety of instructional methods and techniques to help all learners (even low-performers) experience success (Brown, 2003, pp. 50-51).

Self-efficacy: belief in one's ability to perform in a certain manner to accomplish a task and achieve certain goals (Goddard, Hoy, & Woolfolk Hoy, 2004, p. 4; Ross, 2007, p. 50).

Teacher-centered teaching: associated mainly with the transmission of knowledge in a lecture-style format. The focus is mostly on content as opposed to how a student processes and learns information (Brown, 2003, p.50-51).

Teacher efficacy: a teacher's perception that they can bring about student learning (Goddard, Hoy, & Woolfolk Hoy, 2004, p. 4; Ross, 2007, p. 50).

Assumptions

This study assumed that faculty honestly reported their teaching methodologies and perceptions on the teaching and learning process. To ensure participants answered openly and honestly, anonymity and confidentiality were assured and maintained. Additionally, participants were made aware that they were volunteers and had the opportunity to withdraw from the study at any time without adverse consequences.

Limitations

This study was limited in part by the use of a self-reporting instrument for data collection. Data was limited to self-reported faculty perceptions of teaching effectiveness on student learning. Faculty may not be fully aware of what they do, so they could only report about what they have reflected on. They may not have realized that actions such as walking around the room or starting class on time are part of their teaching style, or how their actions affect student learning. Additionally, the surveys that were returned may not be equitable in terms of field of discipline, thus possibly gaining more influence from one field of study due to more instructors from one area returning the survey.

Scope and Delimitations

The purpose of this study was to gain faculty perceptions on teaching and learning and their teaching effectiveness. To narrow the focus, this study delimited itself to surveying 653 full-time faculty members within three well established community colleges among a district of 10 community colleges in the southwestern United States. Adjunct faculty were excluded due to differences in scheduling and expectations of these part-time faculty members.

Significance of the Study

More than 40% of America's college students attend community colleges (Cohen & Brawer, 2003; Kisker & Outcalt, 2005; Mellow & Heelan, 2008). While much is known about the students (Phillippe & Sullivan, 2005), there has been a lack of research on community college faculty, community college classroom practices, faculty perspectives on teaching and learning, and factors that influence faculty teaching style

and methodologies (Cohen & Brawer, 2003; Isaac & Boyer, 2007; Outcalt, 2002; Sperling, 2003). The intent of this research study was to fill this gap and contribute to current research and practice about what is known about the teaching-learning process and actual community college classroom practices. This study contributes to positive social change for students and faculty by providing current research data to help inform and encourage administrative vision, support, and policies relating to faculty development, and learner-centered programs to increase student engagement and success. According to data from Phillippe and Sullivan's (2005) national profile of community colleges as well as Cohen and Brawer's (2003) survey of American community colleges, the student and faculty populations of the three colleges chosen for this study reflect those of community colleges throughout the United States. This suggests that this study's findings may have applicability nationwide.

Summary

Chapter 1 has identified that faculty are constantly challenged to change their teaching methodology while being accused of *teacher-centered teaching* and inflexibility to change. Yet limited data exist on actual teaching practices, especially of community college faculty. This study employed mixed-methods questioning and analysis to expand knowledge of community college faculty. The goal of this study was to provide rich and descriptive data on teaching methodologies, assessment techniques, and perceptions of faculty development among community college faculty to enhance understanding among all community college constituents. This study provides data on what practices faculty employ to enhance the teaching and learning process and why they do so. These data

may provide a basis for learner-centered faculty development as well as learner-centered campus-wide policies to increase student engagement, persistence, and success.

Chapter 2 provides a review of current literature about issues on teaching and learning, the research method to be employed, and the research questions to be explored. Chapter 3 describes the research design, content of the survey instrument, and methods of proposed data collection and analysis. In chapter 4, the results of descriptive statistics and quantitative analysis are reported, and the survey findings in response to the research question are analyzed. In chapter 5, the study is summarized and conclusions are presented along with recommendations based on survey results for action and further research.

CHAPTER 2:

LITERATURE REVIEW

Introduction

Community colleges and their faculty are frequently challenged to change their teaching style and accused in national reports of being inflexible to change (Conti, 2004). Yet there is not agreement on a best method of teaching to change to that would ensure student learning and success. These criticisms have increased over the past 3 decades, despite a lack of research on community college faculty, classroom practices, faculty perspectives on teaching and learning, and factors that influence faculty teaching style and methods. The literature review in this chapter explores issues related to the gap in teaching and learning: an investigation of who 21st century students are, the dynamics of their diversity, and how this impacts teaching and learning in the community college classroom; teaching and learning theories aimed at meeting the diverse needs of students to improve learning and persistence; an exploration into what is known about community college faculty; and an analysis of self-efficacy theory as it applies to understanding faculty motivation and improving the teaching and learning process.

The literature reviewed in this chapter was compiled through keyword and author searches in Academic Search Premier, Education Research Complete, and the Educational Resource Information Center (ERIC), as well as SAGE Online Journals relating to education. Searches were additionally conducted on leads through bibliographies, end notes, and in-text references to other sources along with instructor recommendations. Search terms included teaching, learning, adult

education, learning styles, learning theories, community college students, diversity, culture, underpreparedness, teaching effectiveness, learner-centered education, community college faculty, teaching perceptions, self-efficacy, and teacher efficacy.

The 21st Century Community College Student

Most community colleges have an open-door entrance policy allowing access to individuals of all backgrounds, educational levels, socioeconomic status, and needs (Cohen & Brawer, 2003; Mellow & Heelan, 2008; Saenz, 2004). This open-door policy is designed to provide all individuals with the opportunity to develop the credentials they need to be successful. In the past 3 decades, America has seen an increase from 11 million to 25 million students in postsecondary education (Barrington, 2004). More than 40% of all first-time college students and 45% of all minority students in the U.S. attend a community college (Mellow & Heelan, 2008; Quigley & Bailey, 2003), creating a student body that now consists of a large group of "nontraditional" students more mature in age and representing larger percentages of minority groups than in the past. Diversity exists in age, gender, race, ethnicity, and academic preparation, yet critics have stated that "higher education has been slow to take diversity into account in the teaching/learning process" (Barrington, 2004, p. 425).

There is little debate that people of different ages, gender, race, and culture have different needs in the classroom or that different people learn differently (Cohen & Brawer, 2003; Jones, Reichard, & Mokhtari, 2003; Mellow & Heelan, 2008; Milliron & De Los Santos, 2004; Mupinga, Nora, & Yaw, 2006). Today's divergent group of students has necessitated change in teaching styles and strategies. Curriculum and

instructional development have included competency-based approaches, mastery approaches, holistic approaches, curriculum integration, student-centered education, learning-centered education, and an increased use of educational technology for individualized instruction (Brown, Murphy, & Nanny, 2003; Jones et al., 2003; Mellow & Heelan, 2008). New rules for learning are being developed to provide a more effective approach to individualized instruction and to meet the diverse array of student needs (Cohen & Brawer, 2003; Johnson, 2006; O'Banion, 1997). Among all of the teaching and learning theories in existence, there is not agreement on any one method in which a teacher should teach or be trained to ensure student learning, especially at the community college. Faculty should be continuously trained on the latest teaching methodologies to increase student success.

Historically, many university and community college policies and services have been developed and implemented based on the profile of a "traditional" college student, defined as "one who starts college right after high school, is financially dependent on parents, attends college full-time, lives on campus, and has few work or family obligations" (Saenz, 2004, p. 100). The traditional student once was white, male, and between 18-24 years of age (Jones et al., 2003). Students are now older than the traditional student and the number of female and minority students is increasing. Community college students do not live on campus and many do not attend full-time. Teacher-centered strategies based on the traditional student are less applicable at community colleges today due to the diversity and uniqueness of their student population (Mellow & Heelan, 2008; Saenz, 2004).

The Effects of Diversity in the Classroom

Diversity has become a classroom issue due to the significance of the differences in learning among students, which can stem from different maturity, experience, motivation, personal values, and needs for learning. Specific issues will be addressed based on four main categories of diversity: age, gender, race and culture, and underpreparedness.

Age

In the context of diversity and its effect in the classroom, a major component is the change in and variation of age of the student. Adult students over the age of 24 have become a growing population in higher education, reaching 43% of total undergraduate enrollment. Many are attending college for the first time and are inadequately prepared academically and socially for college-level learning. As a result, many adult students do not persist, creating high levels of student attrition (Berker, Horn, & Carroll, 2003; Chaves, 2006; Kasworm, 2003).

Community colleges have a long way to go to increase retention and improve learning in adult students' lives and "a radical redesign of curricula offered to adult students is necessary" (Chaves, 2006, p. 149). Community colleges need to take into account the adult students' level of college readiness, challenges to college, and support mechanisms required for academic success. Elements of students' needs and interests must be incorporated into the curriculum to create independent, self-directed learning, thus enhancing student motivation. New curriculum should be at least partly self-directed, enabling students to be self-starters when not in the classroom. Experiential

learning should be included, creating opportunities to challenge or affirm old knowledge while creating new understandings. By applying learning theories, providing support services, validating students' efforts and contributions, and respecting and understanding different learning abilities and preferences, community colleges can transform adult learning and greatly improve the persistence and retention of their adult student population (Chaves, 2006).

National statistics on adults in higher education were examined by Kasworm (2003), who reported that 85% of adult students indicate career goals as their motivation for college. Milliron and de los Santos (2004) explained that baby-boomers reaching retirement age want new careers and older students are using community colleges for short-cycle training, industry certification, reverse transfer, or alternatives to graduate school to gain technological skills. Upon examination and analysis of 6 years of national data, Berker, Horn, and Carroll (2003) established that 82% of adult students work mostly full-time while enrolled in college. They reported that between work, finances, and family responsibilities, 62% of adult students are unable to complete their degree or certificate program even though they feel it is an important credential. These findings indicate that adult students require courses that develop academic and career skills, flexible scheduling, and a system that can support adult lifestyle commitments (Berker et al., 2003; Cohen & Brawer, 2003; Kasworm, 2003).

Illeris's (2003) research, based on 3 years of observations of teaching sessions and individual and group interviews of adult students, indicated that adults have similar characteristics in the classroom based on age groupings, and he classified adult learners into three specific generations. Students 45 to 50 years of age and older were identified

with a “wage worker” identity in which one has to adapt and do what others have determined in return for a wage. School is degrading to them; they will show and do the work, but are resistant to participate in activities outside of the box. Adult students 25 to 45 years of age were described to be more accepting of education. They tolerate it so they can get into more rewarding employment or a better paying position or to gain in social status. Their expectation is to gain relevant skills, but they must see how those skills benefit them directly. Young adult students, 18 to 25 years of age, were conveyed to have a completely liberated attitude. They do not follow traditional structures or norms. They look at education as a means to give them skills, but only for now. They embrace the concept of lifelong learning to the extent that education is there to try things out. If they are not immediately engaged in the classroom, they will stop going. Some of these mixed motivations and attitudes identified by Illeris (2003) are contradictory to most administrators’ and constituents’ assumptions that community college students are committed to their education because they want to be in college and learn.

Gender

Another element of increasing diversity in the classroom is the shift in gender. As of 2001, 58% of community college students were women (Chaves, 2006; Phillippe & Sullivan, 2005). Most learning style research studies indicate there are differences in learning between men and women (Chaves, 2006; Jones et al., 2003; Keri, 2002). A study by Jones et al. found that in general, males tend to prefer traditional analytical learning, and females tend to prefer nontraditional experiential learning. Keri indicated that male students prefer applied learning styles using hands-on and life-experiences as a

basis of learning, whereas female students prefer abstract conceptual learning with reading assignments, organized materials, and knowledgeable instructors. While their studies indicate dissimilar findings, the studies by Jones et al. (2003) and Keri (2002) do support the theory that different students learn differently.

Some unique issues and difficulties that women may face that can interfere with learning include a higher level of stress then men as a result of parenting, family health concerns, and financial constraints (Mellow & Heelan, 2008). A lack of encouragement or ability for women to see themselves succeeding in certain fields, technologies, or roles has hindered women from trying or succeeding in some areas of education (Lips, 2007). Community colleges can aid the female population with day care, specialized orientations for women, academic and financial aid advisement, and peer advisors (Bryant, 2001; Mellow & Heelan, 2008). Bryant indicated that to remain in college, women need to have clear goals of a certificate or degree, or a real intention to make a life change, or they may not persist in college. As with differences in age, differences in gender create unique needs in the classroom.

Race, Ethnicity, and Culture

To fully understand the changing student population and diversity in the classroom, one must also take into account race and culture. National statistics for overall community college enrollment in 2002 portrayed the student population as 59% White, 14% Hispanic, 12% Black, 6% Asian or Pacific Islander, 2% nonresident alien, 1% Native American, and 6% unknown (Berker et al., 2003; Phillippe & Sullivan, 2005). U.S. Census bureau data indicate that minority enrollments in community colleges will

increase by approximately 12% from the year 2003 to the year 2015 while the White student population will decrease by approximately 8% (Milliron & de los Santos, 2004).

These students of differing races and cultures have differences in learning styles and educational backgrounds. Research studies have demonstrated that there is a significant difference in learning styles, academic preparation, and family support among ethnic and socioeconomic groups, indicating that the traditional teaching method of an instructor leading a lecture-based course is not effective for many of these groups (Cho & Ford, 2001; Harrell & Forney, 2003; Tucker et al., 2005; Weis & Fine, 2001). Saenz (2004) noted that there was a 143% increase in both enrollment growth and in the number of associate degrees awarded to minority students from 1980 to 2000. According to Saenz, while minority enrollment rates are increasing at community colleges, minority degree completion rates remain low. U.S. Department of Education statistics confirm that out of 200,000 associate degrees awarded by community colleges in 2000, only 9.6% went to African Americans, 10.1% to Hispanics, 5.3% to Asian Americans and Pacific Islanders, and 1% to American Indians or Alaska Natives, figures that are significantly lower than the racial groups' proportional representation in the student body.

Weis and Fine (2001) asserted that more than 20 years of research shows that traditional curriculum, standardized testing, bureaucratic organization, teacher practices, and college preparation reproduces social inequalities among students of color and fail to educate most poor and working-class students. Weis and Fine argued that "although it is well understood that schooling plays a crucial role in offering opportunities for individual social mobility, it does, at the same time, serve to perpetuate and indeed legitimize widespread structural inequalities" (p. 497). Teachers need to challenge minorities and

underprivileged students to reshape their identity and rise above the circumstances of poverty, race, ethnicity, and geography to build a better future.

Researchers have found that learning styles reflect the different cognitive processes that students use to learn. Cho and Ford (2001) composed a survey to categorize the demographic characteristics of their participants by age, gender, academic major, socioeconomic status, and ethnicity. They compared these data with data collected relating to learning styles of each of their participants. Their findings demonstrated a significant relationship among ethnicity, socioeconomic status, learning styles, and success in the college classroom. These findings were corroborated in studies by Harrell and Forney (2003) and Tucker et al. (2005), each of whom urge teachers to address multiple learning styles. Discussion of the findings in each of these researchers' reports assert that by providing multiple teaching methodologies for students to learn new subjects or solve new problems, an instructor can serve as a facilitator of learning and be more effective and successful at getting students to learn and succeed.

Race and culture are not the same, although some hold that race can be a form of culture (Rogoff & Angelillo, 2002; Smith & Ayers, 2006). Rogoff and Angelillo as well as Smith and Ayers defined culture as a learned behavior passed down from generation to generation; a patterned configuration or shared identity of routine, values, practices, and methodology to tasks that make sense to a community or group's way of living. Rogoff and Angelillo suggested that culture influences behavior, attitudes, problem solving, social interaction, and spiritual beliefs. Membership in culturally defined communities is often associated with certain learning styles and cognitive processes, but educators should not stereotype learners by group membership. Within each cultural group, individuals

may exhibit unique learning style preferences, views, and goals (Rogoff & Angelillo, 2002; Smith & Ayers, 2006). According to Smith and Ayers, community college educators need to expand their understanding of how different cultures (a) communicate, perceive their world, and relate to others within and outside of their culture, and (b) understand and process new learning, behave in different cultural settings, and make their needs and interests known. Educators should take learning style and cultural differences into consideration as they plan, design, implement, and assess curriculum, and to design alternative activities to reach the same objective and give students the option to select the one that best meets their learning style and needs.

Underpreparedness

In addition to varying learning styles and educational needs across age, gender, race, and culture, community college students often have difficulty with postsecondary level reading, writing, and mathematics even though they may have successfully completed high school (Perin, 2006). Byrd and MacDonald (2005) reviewed a national study on community college education and reported that when it comes to student readiness, 41% of students entering community colleges are underprepared in at least one of these basic skills. To assist these underprepared students, community colleges provide developmental education courses and study skills courses, which Perin described as integral to the open admission policy of community colleges in order to provide open-access. A phenomenological research study by Byrd and MacDonald (2005) revealed that in addition to academic underpreparedness, many students fail to understand college requirements. Students often lack the knowledge that attendance, preparation for class,

utilization of course materials, and collaboration with classmates is needed for success in college.

Theories and Research on Teaching and Learning

Bandura (1986) and Johnson (2006) stated that the large number of students that need to be accommodated in the classroom today has caused schools to become uniform in their method of teaching to accommodate the masses through one method of teaching. This may work well for some students, but it tends to hold faster students back and leave many of the slower students behind (Bandura, 1986; Piaget, 1970). Each individual's experiences, developmental stage, level of preparedness, and learning preferences effect and determine behavior and learning, as do physical factors such as age, gender, race, and cultural background. With this in mind, and so much variation in teaching and learning theories and practice, questions evolve from the research such as: which theories and principles should the community college adopt to enhance learning? What training is best for community college faculty to provide successful education, cognitive development, and growth? Studies on human development and learning such as pedagogies, learning styles, multiple intelligence theory, and various perspectives on teaching for optimal learning indicate there is not one clear cut answer.

Pedagogy versus Andragogy

Methods for teaching adults have many names and strategies, including pedagogy, andragogy, collaborative learning, active learning, student-centered learning, and so forth (Buendia & Morales, 2003; Mellow & Heelan, 2008; Rachal, 2002). The term *pedagogy* is used frequently and has been described as the art or science of teaching (Boettcher &

Conrad, 2004). Many relate pedagogy to lecture-style teaching and learning wherein the teacher has total control (Barrington, 2004; Buendia & Morales, 2003; Ozuah, 2005). According to Buendia and Morales (2003) and Ozuah (2005), pedagogy gives the teacher total responsibility for what will be learned, as well as how, when, and if it has been learned. Motivation to learn is stemmed by external factors, grades, and consequences of failure. Rachal (2002) challenged that this teacher-centered style and issuance of grades is common because the results can be seen and quantified through predictable and measurable objectives, outcomes, and performance indicators, although the value of what is being quantified is under debate by many, such as Barrington; Buendia and Morales; Merriam, Caffarella, and Baumgartner (2007); Ozuah; and Rachal.

Andragogy has been prevalent in educational models and studies for almost 40 years, since Knowles popularized the term in the late 1960s (Merriam et al., 2007; Rachal, 2002). Rachal described andragogy as a participative style of learning as opposed to the traditional pedagogy that is lecture based. Buendia and Morales identified andragogy as a model wherein learning is more important than teaching, and in which the teacher facilitates and guides the learning process. Bolton (2006) explained that andragogy enables adult learners to understand why something is important to learn, thus increasing their readiness and motivation to learn. Under the concept of andragogy, motivation to learn comes from internal motivators such as self-esteem, self-confidence, and goal attainment. These motivators are opposites to the external motivators understood as components of pedagogy (Bolton, 2006; Buendia & Morales, 2003).

Buendia and Morales suggested that a major characteristic of andragogy is that the learner and facilitator collaborate on what learning objectives, strategies, resources,

and assessment will occur within a course. The difficulty in implementing this style of learning is that institutional effectiveness is largely determined by learner achievement, which is typically measured by tests and grades. Goals vary among students, especially if they are seeking a degree or just taking a class for personal enrichment, making the effectiveness of andragogy difficult to measure.

Learning Style Theories

Learning style theories have been around since the 1950s (Shearer, 2004). Since the concept of learning styles evolved, debate has continued about the validity of increased learning due to the implementation of learning styles (Burke and Dunn, 2003; Gardner, 2004; Karns, 2006). Educational researchers have also debated which classroom pedagogies foster better learning, teacher-centered or student-centered, and whether teaching styles should be matched to learning styles (Giles, Ryan, Belliveau, De Fritas, & Casey, 2006; Morrison, Sweeney, & Hefferman, 2006).

According to Giles, Ryan, Belliveau, De Fritas, and Casey (2006), popular learning style theories have included the Myers-Briggs type indicator by Isabel Briggs Myers and Katherine Briggs in 1962, which focuses on cognitive and perceptual differences (visual, imager, wholist, or analytic), sensory modalities (visual, auditory, kinesthetic), or personality or psychological types; Gardner's multiple intelligences, published in 1983, which focus on students' need or ability to learn across multiple modalities; Felder and Soloman's inventory of learning styles, established in 1981, which organizes information handling into four categories: processing (active or reflective), perception (sensory or intuitive), input (visual or verbal), and understanding (sequential

or global); and the Kolb model, published in 1976, which describes a learning cycle (concrete experience, experimentation, conceptualization, and reflection) that learners go through.

The framers and supporters of these theories suggest designing curriculum and instructional delivery based on their philosophies. Some suggest that matching teaching style to learning style will provide a deeper understanding and more positive attitude toward subject matter (Brown, Murphy, & Nanny, 2003; Karns, 2006). Others suggest focusing on the learning strategy. Many learning style theories view learning as an individual process that is best facilitated by the teacher, where there should be less emphasis on memorization and more focus on a student-centered classroom where exploration takes place (Giles et al., 2006).

In a study designed to examine teacher-centered versus student-centered classes and to assess the influence of teaching style on student learning, Giles et al. (2006) identified that stronger grade point average students (above 90%) performed better in a student-centered class. They were more intrinsically motivated and preferred classrooms that were interactive. Lower grade point average students (below 60%) performed better in a teacher-centered class. They were more extrinsically motivated, but preferred an enthusiastic teacher who can make a classroom interesting without student interaction and discussion. The students with average grade point averages (60 to 90%) were able to adapt to either teaching style, although grades, attendance, and attitudes were better in student-centered classes. These results imply that faculty should incorporate a good balance of both teacher-centered and student-centered styles if classes are heterogeneous.

Studies have indicated that when teaching styles are compatible with student learning styles, students retain information longer, apply it more effectively, and are more positive and successful in their learning (Karns, 2006; Morrison, Sweeney, & Hefferman, 2006; Young, Klemz, & Murphy, 2003; Burke & Dunn, 2003). Students may be stronger towards one preferred learning style, but can learn through multiple modalities. Therefore, an instructor can design an effective class by incorporating varying activities that span multiple learning styles.

Multiple Intelligences

Jones et al. (2003) reported that traditional lecture still persists in many community colleges, despite new advances in human learning and cognition. They indicated that the fact that many students succeed in a lecture-style classroom even though this may not be their best method for learning suggests that learners have multiple intelligences and learning styles.

Gardner's theory on multiple intelligences (MI) is a teaching and learning theory that garners interest and debate among researchers, educators, and administrators (Gardner, 2004). The term is sometimes used in conjunction with or in place of learning styles, although Shearer (2004) denoted they are not the same. Shearer stated that learning style theories describe the unique learning preferences of students in the process of learning, whereas multiple intelligences emphasize skill acquisition to create a product, deliver a service, or problem-solve. Denig (2004) agreed that there are differences, but described multiple intelligence and learning style theories as complementary. According to Denig, both challenge educators to change the manner in

which they teach. Multiple intelligences stress the need to change instruction to capitalize on students' abilities, whereas learning styles address what is taught and how, and suggest the use of different instructional resources. Both have demonstrated that when instructors incorporate multiple teaching methods and strategies, increased learning can occur.

Many in the field of education have embraced MI theory, which Gardner (2004) has described to work well for non-mainstream students such as gifted students, students with learning disabilities, multicultural students, adult learners, and community college students. School reform has forced many educators concerned with implementing educational policy to look at alternative ideas for curriculum, assessment, and pedagogy. The educational climate is politically complex, however, and some suggest it does not favor the progressive ideas of MI theory due to testing and assessment pressures and societal demands for uniform curriculum and accountability (Barrington, 2004; Gardner, 2004; Shearer, 2004).

MI theory would improve teaching and learning and be inclusive to all students according to Barrington (2004). He alleged that the traditional mode of teaching is teacher-centered, and teachers lecture, test, and reward on just linguistic and mathematical levels of intelligence. Barrington indicated that lecture is ineffective and does not take into account sociocultural values. Furthermore, students complain about the poor quality of lectures and assessment. MI allows for students that are not successful under traditional teaching methods to use their strengths and develop their experience and intelligence in their own ways.

Learner-Centered Education

Teaching has always been the primary goal of the community college (Hardy, 2006; Sperling, 2003). Barr and Tagg (1995), in their seminal work on student learning, proposed that colleges shift from providing instruction to producing learning. They asserted that the traditional teacher-centered or instructional paradigm makes teaching the end purpose. A college's mission is not instruction but producing learning with every student by whatever means work best. Barr and Tagg alleged that the lecture format where faculty talk and students passively listen is contrary to almost every principle of optimal settings for student learning. In a learning paradigm, student learning and success set the boundary. Lecture is not prohibited, it is merely one of many possible instructional methods, all evaluated on the basis of their ability to promote appropriate learning.

O'Banion (1997, 1999) introduced a learning college model to assist schools in the transition from a teacher-centered to a learner-centered institution. O'Banion stated that most community colleges are struggling to operate within a teaching-centered paradigm that is dying. Yet to change to a new paradigm is difficult, because the bureaucratic structure that is now in place provides rewards or incentives for following the rules, not for the academic achievement of students. This structure defeats change and creates resistance to it. Despite difficulties in and resistance to change, however, internal and external issues are forcing educational institutions to improve teaching and learning.

O'Banion's learning college places learners first so that educational systems better serve their customers. According to O'Banion (1997), a learning college creates

substantive change in individual learners, offers as many options for learning as possible, engages learners, assists learners in collaborative learning activities, and defines the roles of the facilitators based on the learners' needs. Facilitators only succeed when their students succeed by documented improvement in learning. Technology is encouraged to expand and support learning, and to offer a means to reduce time and place restrictions of the traditional classroom via online instruction. O'Banion (1997) advised that assessment should change from the teacher being the sole judge and jury of a learner's needs, abilities, and progress to a process based on the needs of the learner. Additionally, institutional assessment must shift the focus from the number of students that transfer to a university or get placed in jobs related to their career program to a continuing process of understanding and improving student learning.

The work of Hubball and Poole (2003) and Brown (2003) has also demonstrated support for learning-centered education and described the learning-centered approach to teaching as a means to enhance critical thinking, communication, and problem-solving skills among students. They portrayed the evolution of learner-centered education as having the potential to meet the diverse needs of students in higher education.

In contrast, Cohen and Brawer (2003) question whether the learning college represents a possible reality or yet another set of good intentions that will fail to transpire. They remarked that the learning college will only bring about lasting change if its advocates can uphold a conceptual link between teaching and learning. While O'Banion advocated breaking teacher-centered traditions, Cohen and Brawer stated that "classroom-centered instruction will not only not disappear, it will not even diminish very much as a percentage of instructional effort" (p. 417). Burgan (2006) called the

learning paradigm an assault on education, regarding traditional faculty practices as a total failure. Burgan (2006) referred to the learner-centered paradigm as a remnant of the teaching reforms of the 1970s.

Learning Theories and the Use of Technology

To assist faculty in the teaching process, community colleges were quick to adopt computer technology and place computers in classrooms or to start implementing online programs. Simply having technology available is inadequate, however, if it is not used correctly (Al-Bataineh & Brooks, 2003; VanWagoner, Bowman, & Spraggs, 2005). While technology provides new methods for instructional delivery, the role of the teacher is still pivotal to student learning, regardless of the use of technology in the teaching and learning process. Al-Bataineh and Brooks (2003) advised that technology should be used as a teaching strategy and tool to advance educational outcomes and make learning richer and more engaging for community college students. Mupinga, Nora, and Yaw (2006) explained that the learning styles, expectations, and needs of students do not change for students in courses using online technology. Therefore, the design of online learning activities should strive to accommodate multiple learning styles, the same as in traditional face-to-face courses. Mupinga et al. recommended using a variety of teaching strategies and providing information to students in various formats. Cohen and Brawer (2003) called to mind how the phonograph, telephone, radio, television, and computer were all supposed to change teaching, and while they have changed the way information is transmitted, they have not changed the way in which most postsecondary educational institutions teach.

Community College Faculty

Education has seen the introduction of new teaching styles, learning styles, and student-centered learning methods, all of which have demonstrated motivational advantages and increased student learning. Yet community college faculty are not trained educators, support for teachers and teaching at many institutions is limited, time and resources are not available for faculty to adequately learn new teaching methods and technology, and good teaching is not adequately rewarded (Barrington, 2004; Boettcher & Conrad, 2004; Eddy, 2007; Sperling, 2003). If, as acknowledged by Hardy and Laanan (2006) and Sperling (2003), the primary goal of the community college is teaching, is this not contradictory? Barrington (2004) stated that it appears that there is "a lack of institutional commitment for the ongoing improvement of teaching" (p. 426).

If faculty were trained as educators, they could intentionally plan strategies to increase learning, but many have to discover what works through practice and observation. Boettcher and Conrad (2004) confirmed that postsecondary faculty generally get hired with a high level of competence in a content area, and "then learn about teaching and learning through peer observation, collegial discussion, trial and error, and their own educational experiences" (p. 1). Many faculty know how to teach and have good intuition about what works, but do not know why. According to Pratt (2002), faculty must understand what they do and why in order to improve teaching and learning.

Colbeck, Cabrera, and Marine (2002) and Howell (2002) recounted that faculty predominantly use traditional lecture methods to impart the knowledge they believe that students need, as was indicated by Jones et al. (2003) and Barrington (2004). According to Colbeck et al., more than three-fourths of faculty in their study were using lecture as

their primary teaching method. Howell (2002) argued that this traditional approach to teaching leads to student disinterest and passivity and causes students to withdraw from school, which spurs faculty frustration at their students' lack of motivation and effort. Despite negative descriptions and consequences, community college educators are alleged to continue to rely on this style, possibly because it is what they know and were taught, or possibly due to lack of time and support to learn new methods (Barrington, 2004; Howell, 2002; Jones et al., 2003).

Freire (2000) noted that a careful analysis of the teacher-student relationship at any level reveals the teacher as a narrator and the student as a passive listening object, the premise of lecture-style teaching. He alleged that education suffers from narration sickness, and presented a banking concept of education. According to Freire's banking concept, instead of communicating, the teacher "deposits" words into a receptacle (the student) that the students passively receive, file, and store (memorize and repeat). The teacher, possessor of knowledge, assumes that the students' ignorance is absolute, justifying the teacher's existence. Freire argued that this banking concept of education keeps people oppressed and teaches them to passively accept the world around them. It hinders learning, creativity, critical thinking, and transformation. Freire proposed that the only way a teacher's thinking can be authenticated is "by the authenticity of the students' thinking" (p. 77). The teacher cannot think for the student or impose their thoughts upon them. The teacher must accept that students are conscious beings and employ true communication, dialog, and problem-posing education. For effective and liberated education to occur, Freire maintained that the teacher and student must both concurrently serve as teacher and learner, jointly responsible for learning.

Changing Roles and Commitment to Teaching and Learning

Increasing demands from students, administrators, industry, and technology has forced faculty to see their role of teaching change from educator to a multi-faceted role of educator, resource manager, IT specialist, marketing professional, psychologist, and mentor, leading to increased stress and heavier workloads. According to a study by Abbott-Chapman, Hughes, and Williamson (2001), while faculty felt pressed for time, they remained committed to the quality of the teaching and learning and to responding to the needs of their students. Abbott-Chapman et al. reported that people choose teaching careers due to intrinsic rather than extrinsic rewards, a finding supported by Leithwood and Beatty (2008). Abbott-Chapman et al. performed a 10-year longitudinal study on teachers' perceptions of classroom competencies which indicated that helping people and mental stimulation are more important to faculty than pay, status, and working conditions.

Abbott-Chapman et al. further identified that faculty believe they have an effective balance between being learner-centered, subject-centered, and incorporating multiple learning styles. Measuring teaching effectiveness is difficult, however, because teaching is so multidimensional and complex. Teaching is profoundly affected by the teacher, the student, and circumstances beyond the classroom. Boettcher and Conrad (2004), Galbraith (2004), and Pratt (2002) asserted that factors important to successful teaching include teacher enthusiasm, organization, group interaction, individual rapport, breadth of coverage, and quality of work. They argued that instructional strategy should involve a combination of lecture, discussion, problem solving, presentations, projects, and assessment. Faculty must have the appropriate skills to analyze a course, determine

objectives, design a learning experience, and evaluate learning. There is no one prescription for teachers to follow for all subjects and all students that will result in successful learning every time. Good teaching takes many forms and cannot be limited to only one method.

Enhancing Student Learning and Persistence

Since demands for accountability are increasing and persistence and completion percentages are the main components focused on to measure accountability, many campuses look to the faculty to solve student issues and retain students (Sperling, 2003). According to Sperling, faculty value excellence in the classroom and many devote themselves to discovering and utilizing instructional methodologies that promote student success. Due to the significant diversity of the student body, "a faculty committed to student success is often challenged to examine and question what they teach, how they teach, and what information about learners and learning will help them teach in more effective ways" (p. 594).

Sperling (2003) stated that student motivation frustrates many community college faculty. Demands for more effective strategies to combat student motivation rise periodically, but many "solutions" end up not working and discarded. To improve teaching and learning, he advised making teaching and learning a significant part of the campus culture. Supporting teaching and learning can develop faculty and help to reinforce that effective teaching can be learned, it is not just a talent, result of trial and error, or a result of good chemistry in a class. The teaching practice can be improved with reflection on what works, what doesn't, why, and where improvements may be

made (Sperling, 2003; Weimer, 2006). A campus must invest in faculty development. Faculty development is essential to the students through improved effectiveness in the teaching-learning process. The ultimate goal of faculty development is, after all, to enhance student learning (Sperling, 2003).

Faculty Motivation and Its Impact on Teaching

Administrators, potential employers, and society have been increasingly demanding faculty "to engage students in active and collaborative projects that will prepare them for team-based problem-solving in the workforce" (Colbeck et al., 2002, p. 1). Colbeck et al. claimed that this approach is more effective in developing critical thinking skills, interpersonal skills, and professional confidence. But what is being done to encourage faculty to engage students, or to understand why faculty teach as they do?

Motivation to use teaching practices that foster desired student learning is not well understood. Most understanding of what motivates faculty to teach the way they do is through speculation according to Colbeck et al. (2002), who investigated motivation utilizing Ford's Motivation Systems Theory to determine the personal and organizational factors that influence teaching methods in undergraduate classes. Their study looked at personal goals for teaching, capability beliefs of one's own skills, and perceptions of organizational support. Capability beliefs are part of Bandura's self-efficacy expectations, the framework for this study.

Colbeck et al.'s investigation examined the varying motivational patterns that influence faculty members' use of traditional lecture to that of active collaborative teaching. They found faculty members' own goals for teaching and beliefs about their

professional skills were strongly associated to the method of teaching they employed. Faculty who had a goal of teaching lifelong learning were more likely to teach through active and participative methods, whereas faculty who had the goal of teaching fundamentals were more likely to teach through traditional lecture methods. Faculty who had confidence in their own interpersonal skills were more likely to use group projects, while those that had more confidence in their presentations skills were more likely to utilize lecture. Those that lacked confidence in their ability to identify, define, and solve problems also use traditional lecture methods. Faculty perception of reward for innovation had no significant effects on the method of teaching used, but the perception of adequate resources did. Those that did not perceive adequate support would be available relied more on lecture methods. This research suggests that teaching goals, teaching resources, and faculty skill development can motivate faculty.

Understanding Faculty Motivation Through Self-Efficacy Theory

The goals of this study have developed from both practical and theoretical concerns about instructional quality at the community college. National reports, accreditation agencies, legislative officials, and community college constituents have criticized college educators and called for national reforms on teaching and learning (Alfred, Shults, & Seybert, 2007; Banta, 2002; Cohen & Brawer, 2003; Hanson, 2006; O'Banion, 1997, 1999).

While the needs of community college students and learning style theories premised to increase student engagement and success have been reported, little research and data exist on actual faculty practices, why faculty teach as they do, and social and

psychological factors that stimulate faculty motivation, especially within the community college (Blackburn, 1991; Cohen & Brawer, 2003; Colbeck et al., 2002, Heimlich & Norland, 2002, Outcalt, 2002). Since faculty are at the center of the educational effectiveness debate, it is important for administrators and faculty developers to understand how faculty perceive their teaching style and effectiveness as well as what motivates them to change or improve their teaching.

Self-efficacy beliefs provide a foundation for human motivation and personal accomplishment. According to Bandura (1997), the creation of conducive learning environments "rests heavily on the talents and self-efficacy of teachers" (p. 240). Bandura stressed that the evidence indicates teachers' beliefs in their instructional efficacy affects how they structure academic activities. Blackburn (1991) noted that self-efficacy theory suggests that "faculty members' decisions about how to distribute their time will hinge on beliefs about the likely impact of their actions. They will give time to activities they believe will result in favorable outcomes" (p. 6). This implies that when faculty believe what they do matters, they are motivated to act. Teachers' self-efficacy beliefs are important in terms of decisions about teaching, managing the classroom, organizing courses, motivating students, and communicating effectively (Erdem & Demirel, 2007).

Self-efficacy is grounded in the theoretical framework of social-cognitive theory (Bandura, 1986, 1997). Social cognitive theory upholds the concept that people are self-organizing, proactive, self-regulating, and self-reflecting. People form expectations, set goals, anticipate outcomes, monitor and regulate actions, and reflect on their personal efficacy (Bandura, 1986, 1997; Skaalvik & Skaalvik, 2007). The ability to form

expectations gives humans the capability to predict the outcomes of their behavior before the behavior is performed (Bandura, 1986, 1997). Self-regulatory functions indicate that people behave in a manner motivated by their own internal standards, and self-reflective capabilities suggest that people analyze their experiences and think about their own thought processes. Self-reflective capability enables a person to gain information about themselves and the world, making it possible for them to monitor their ideas, predict occurrences, and either act on them or change their plans (Bandura, 1986; Bandura & Walters, 1963).

The prediction of occurrences and anticipation of probable effects of different courses of action requires forethought, which enables people to motivate themselves and guide their actions anticipatorily. The expectations of behavioral outcomes, more so than actual outcomes, influence the likelihood that a behavior will be performed (Bandura, 1986; Bandura & Walters, 1963). According to Bandura (1986), motivation requires forethought, goal setting, and self-evaluation of one's own behavior. When people commit themselves to a specific goal, they enhance their efforts to achieve that goal. Perceived self-efficacy influences choice of goals, the amount of effort expended to achieve those goals, and perseverance when difficulties arise.

Bandura (1997) noted that a central question in any theory of the cognitive regulation of motivation and action is the issue of causality and whether or not efficacy beliefs operate as causal factors in human functioning. Based on the results of numerous and diverse causal tests, Bandura alleged that "the evidence is relatively consistent in showing that efficacy beliefs contribute significantly to level of motivation and performance" (p. 61). Efficacy beliefs can raise and sustain motivation, but the skills to

perform the desired task must exist as well. People may have the skills and a strong sense of efficacy to do a task well but choose not to do so. This usually occurs when there is no incentive to do so, or people lack the necessary resources to perform the activities adequately, such as equipment, time, institutional support, financial support, and so forth.

According to Bandura (1997), teachers with a high sense of instructional efficacy operate on a belief that struggling students are reachable and teachable through extra effort and appropriate teaching techniques, whereas teachers with a low sense of instructional efficacy believe there is little they can do if students are unmotivated. Those with low teaching efficacy take a pessimistic view of students' motivation, try to control behavior through strict regulations, and rely on extrinsic rewards and punishment, further limiting student interest and motivation. These instructors are typically stressed and angry about students, lack a sense of personal fulfillment, and if they had it to do all over again, would not choose a teaching career. Those teachers with high teaching efficacy are less controlling and support development of their students' intrinsic interests and academic self-directedness. Teachers who believe in their ability to promote learning are less stressed, solve problems, and create positive learning experiences for their students. Additionally, teachers' beliefs in their instructional efficacy positively affect their students' academic progress, which then positively affects teachers' beliefs in their efficacy to motivate and educate academically challenged students.

Self-efficacy is an important framework for understanding the faculty perspective of teaching and learning. Leithwood and Beatty (2008) corroborated that teachers' beliefs in their ability to teach have a strong influence on the amount of effort they

expend, how long they persist in trying to accomplish tasks, how resilient they are to challenges, and how well they cope with stress. They alleged that even inaccurate beliefs can produce real capacities, which has been demonstrated through considerable empirical research on teachers. Leithwood and Beatty (2008) added that highly self-efficacious teachers also tend to inspire their students to reach beyond their grasp.

While many of the studies on teacher-efficacy have been conducted on primary and secondary teachers (Leithwood & Beatty, 2008; Skaalvik & Skaalvik, 2007), the evidence has shown that teachers with higher self-efficacy are less critical of struggling students, promote expectations of achievement, develop warm interpersonal relationships in the classroom, persist longer at guiding a student to success, have a greater likelihood of experimenting with instruction, possess a greater willingness to try a variety of materials and approaches in the classroom, have better planning and organization for instruction, comprise more positive attitudes toward educational reform, and higher levels of job satisfaction (Bandura, 1997; Leithwood & Beatty, 2008). These characteristics pertain to the success of the diverse community college students. Skaalvik and Skaalvik's research substantiated teacher self-efficacy as a predictor of student motivation and achievement, students' self efficacy and attitudes, teachers' goals and objectives, teachers' attitudes toward innovation and change, and teachers' use of teaching techniques. Research has demonstrated that higher levels of teacher self-efficacy are positively correlated with higher levels of student self-efficacy, optimistic student attitudes, and increased retention, all of which are important to increase student learning and success in the community college (Leithwood & Beatty; 2008; Goddard, Hoy, & Woofolk Hoy, 2004; Ross & Bruce, 2007; Tucker et al., 2005).

Design Methodology Research Literature

The research studies examined and analyzed for this literature review consisted of various quantitative, qualitative, and mixed-method approaches. The research design for this study evolved from the literature review, current literature on research design and methodology (Creswell, 1998, 2003; Hatch, 2002, Johnson & Christensen, 2004; Weimer, 2006; Yin, 2003), as well as the specific research questions and goals for this study. Creswell (2003) suggested that when designing research, one should consider the epistemology that informs the research, the theoretical perspective of the questions to be answered, the methodology that links the methods to outcomes, and the procedures intended to be employed to collect data. The goal of this research was to gather and analyze data on community college classroom practices and explore faculty perspectives on teaching and learning as well as factors that influence faculty teaching styles, suggesting a mixed-method approach. This research goal developed as a result of criticisms from community college constituents about faculty teaching effectiveness despite a lack of research on community college faculty.

This researcher's theoretical perspective lies closest to the views of pragmatism as described by Creswell. According to Creswell, within the pragmatism paradigm, "knowledge claims arise out of actions, situations, and consequences rather than antecedent conditions (as in postpositivism)" (p.11). Under the pragmatist view, the research problem is what is most important, and using pluralistic approaches aids in gathering knowledge about and understanding the problem. Creswell indicated that pragmatism is a philosophical underpinning of mixed-method studies. Johnson and

Christensen (2004) made similar assertations and affirmed that within pragmatism, “what is important is not abstract philosophy but what works in practice” (p. 30).

Mixed-method studies permit the researcher to draw from both quantitative and qualitative research strategies, enabling the researcher to look at the what, how, and why of a problem or solution. All methods have limitations. The benefit of mixed-methods studies is that the researcher can more easily overcome biases and gain the best of both quantitative and qualitative approaches, improving the overall quality of research (Johnson & Christensen, 2004; Creswell, 2003). Creswell proposed that the researcher can “generalize the findings to a population and develop a detailed view of the meaning of a phenomenon or concept for individuals” (p. 22). Johnson and Christensen suggested that mixed-method research is important to understand both the subjective and objective realities of the world.

This research study is also descriptive. According to Weimer (2006), descriptive research describes and “seeks to establish what is” (p. 109). Descriptive research is the largest and most well-developed kind of practitioner pedagogical research, used to study many aspects of teaching and learning. Descriptive studies may combine quantitative and qualitative data, and have been used to study teaching practices, student attitudes and perceptions, and faculty beliefs and opinions. Weimer indicated that the research tool used most regularly to establish pedagogical baselines is the survey, and cited examples in which surveys provided descriptive data to describe student perceptions on the problem of cheating, best and worst learning experiences of students, comparisons of faculty and student responses on course goals, and faculty perceptions on learning outcomes assessment, to name of few.

As indicated previously, research on community college faculty is limited. Outcalt (2002) performed a quantitative survey study that analyzed the practices and attitudes of community college faculty nationally. Outcalt's method and survey instrument were modeled on Cohen and Brawer's quantitative survey research from 1975. The general research questions used to organize Outcalt's study were: "What are the professional practices and attitudes of community college professoriate in the year 2000? How have they changed on these measures since 1975?" (p. 34). Statistical analysis provided data that identified the professional characteristics of faculty, instructional methods employed, levels of job satisfaction, and institutional and professional involvement, but the research did not describe or provide understanding on why faculty taught as they did, had good or poor job satisfaction, or participated in the institutional and professional activities that they did. A 1997 study by the National Center for Postsecondary Improvement also collected quantitative survey data assessing community college faculty attitudes and trends, again providing data identifying what is happening among community college faculty, but not a descriptive understanding of why.

In an attempt to understand why faculty teach as they do, Blackburn (1991) performed a national survey designed to gather data on faculty perception of their work environment; their competence and efficacy as faculty members; their assumptions about teaching; and their teaching, scholarship, research, and service behavior. While the survey was still quantitative, the questions and analysis were more descriptive in nature. Study respondents included 4,400 faculty, but the specific types of colleges represented were not indicated. The study was not exclusive to community college faculty, however.

The pilot study included a community college, a university, and two unclassified educational institutions.

Drawing from the studies of Blackburn (1991), Outcalt (2002), and the National Center for Postsecondary Improvement (Huber, 1997), yet desiring a richer and more descriptive understanding of how faculty perceive their teaching style and effectiveness, what motivates them to change or improve their teaching, as well as understanding why faculty teach as they do, this study incorporated a descriptive mixed-method survey design. The overall research design and methodology of this study is presented in detail in chapter 3.

Summary

This chapter presented a review of the current literature about issues on teaching and learning. This included examining who 21st century community college students are, the dynamics of their diversity, and how this impacts teaching and learning in the community college classroom. Teaching and learning theories hypothesized to meet the diverse needs of students to improve learning and persistence were explored, along with what is known about community college faculty and self-efficacy theory as it applies to understanding faculty motivation and improving the teaching and learning process. Finally, methodology literature was researched, which supported a descriptive mixed-method survey design.

Chapter 3 addresses the mixed-method survey approach, as well as alternative research approaches and reasons why they were not employed. The role of the researcher in the data collection procedure, procedures for gaining access to participants, and

measures for ethical protection of participants are discussed. Finally, choices about instrumentation, which data to collect, as well as how and when the data will be analyzed are addressed.

CHAPTER 3:

RESEARCH METHOD

Introduction

This research study examined data on classroom practices in the community college and analyzed faculty perspectives on teaching and learning as well as factors that influence faculty teaching styles. The intent was to understand how faculty perceive their teaching styles and effectiveness, what motivates them to change or improve their teaching, and why they teach as they do. Based on the review of design methodology literature in chapter 2, a descriptive survey using mixed-methods appeared to be an effective method to obtain this information. This chapter presents the study's research design, context, data collection and analysis strategies, pilot study of the survey instrument, and ethical considerations.

Research Design

This study used a survey questionnaire composed of open-ended and closed-ended questions. Thus, qualitative and descriptive quantitative data were collected, qualifying this as mixed-method descriptive research. Mixed-method research enables the researcher to explore the what, how, and why of a problem, solution, or phenomenon, and data can be collected concurrently, as was done with this survey questionnaire (Creswell, 2003; Johnson & Christensen, 2004; Weimer, 2006).

Creswell (2003) indicated that "mixed-methods research has come of age" (p. 4) and research is less quantitative versus qualitative and now lies more in the middle, although some mixed-method studies may tend to be more qualitative or quantitative in

nature. Mixed-method data collection involves gathering both numeric and text information to better understand a research problem. Additionally, quantitative counting can include qualitative thinking, and vice-versa (Kempner, 1992). The questions that were to be answered by this study included what, how, and why questions, identifying the need for more than just quantitative or qualitative data. Closed-ended questions can reveal what teaching and evaluation methods community college faculty are utilizing in the classroom, while open-ended questions can reveal why they teach as they do and how they determine their teaching effectiveness.

The quantitative survey questions were descriptive in nature. Descriptive research is an exploratory and nonexperimental form of quantitative research (Johnson & Christensen, 2004). Descriptive research and analysis can aid in learning about and describing the characteristics of community college faculty as well as describe or explain what is occurring in the process of teaching and learning. Numerical indexes such as averages, percentages, and measures of spread can be calculated, and variables can be summarized one at a time or examined for interrelationships. Since the data are descriptive and exploratory, hypothesis testing is not required. Johnson and Christensen stated:

> The primary purpose of descriptive research is to provide an accurate description or picture of the status or characteristics of a situation or phenomenon. The focus is not on how to ferret out cause-and-effect relationships but rather on describing the variables that exist in a given situation, and, sometimes, on how to describe the relationships that exist among those variables. (p. 347)

Educators conduct descriptive research to learn about the attitudes, opinions, beliefs, and behaviors of people, and the survey method of data collection is commonly used in descriptive research as well as predictive and explanatory research (Weimer,

2006). Additionally, descriptive research examines a situation "as it is" (Leedy & Ormrod, 2005, p. 179). It does not change or modify the situation under investigation. This study utilized a survey consisting of closed and open-ended questions to identify a group of community college faculty members' actual teaching practices. The study also explored perceptions on their teaching style, effectiveness in achieving student learning and retention, what they do to engage students, what motivates them to improve their teaching, and why they teach. A rich understanding of faculty perceptions and perspectives was desired to assist in determining how to improve the learning process for student success and persistance.

A self-administered, cross-sectional survey was the most appropriate method of data collection for this study in addition to being a common method for descriptive studies (Brewer & Hunter, 2006; Weimer, 2006). Surveys are popular for both quantitative and qualitative data collection (Cresswell, 2003); the survey can be utilized to understand the characteristics of a population (Johnson & Christensen, 2004); surveys can collect information from people to describe or explain their knowledge, feelings, values, and behavior (Babbie, 1990; Fink, 2006); they can be utilized with a large population relatively affordably and within a reasonable turnaround time (Creswell, 2003; Trochim, 2001), and they can allow for anonymity, and therefore encourage participants to respond honestly (Crowl, 1996; Fowler, 2002).

Fowler (2002) endorsed a self-administered survey as opposed to phone or personal interviews when the topic or information to be collected is sensitive. Many of the faculty invited to participate in this study may have found some of the questions sensitive, and might have been apprehensive about what will be done with the data. The

self-administered survey provides confidentiality and anonymity, which increased response rates and accuracy according to Fowler (2002).

Yin (2003) stated that a survey is advantageous for questions asking what, along with many types of how and why questions. Yin further noted that the survey is particularly beneficial when the research goal is to describe an incidence or phenomenon or when it is to be predictive about certain outcomes. The survey enabled this researcher to gather a breadth of descriptive data from a large population of community college faculty that may be able to be generalized to a larger population of commuity college faculty (Creswell, 2003).

A phenomenological study would have enabled this researcher to explore the meaning of community college faculty members' experiences toward the phenomenon of teaching and learning. Phenomenological research mixes descriptive and interpretive research methods to examine worldviews or personal experiences and attempts to set aside a researcher's prejudgments and experiences in order to objectively question the nature of a particular phenomenon (Creswell, 1998; Hatch, 2002; Johnsons & Christensen, 2004). While phenomenological research would have provided rich descriptions of how and why faculty understand and practice teaching as they do, it was rejected since there is limited research on community college faculty perspectives of teaching and learning and a large quantity of data on faculty perceptions was desired for a stronger generalizability to the profession. To conduct a phenomenological study well, the number of participants would have to have been severly limited in comparison to a descriptive mixed method survey study.

A case study design would have enabled a larger number of participants to be studied than that of a phenomenological study, but acording to Yin (2003), a case study is a prefered strategy for how and why questions. Creswell (1998) indicated that data collection for a case study is extensive, including observations, interviews, documents, artifacts, and reports, and it is not always easy to get enough data to prove a case. Moreover, a case study examines a bounded system, and it is common to research a program, an event, an activity, or individauls, but it explores a range of topics, only one of which might include behavior or a concept such as beliefs. Creswell further identified that gaining confidence of participants can be an issue in a case study, resulting in rejection for this method of study. Based on this researcher's experience with faculty distrust of observation and concerns for academic freedom, a descriptive-mixed method survey study was the best method to gain the desired data and allow for anonymity, thus increasing the likelihood of participation and honestly reported information.

Role of the Researcher

This study employed a self-administered written questionnaire that the participants completed and returned anonymously without contact with the researcher. As stated previously, a survey provided a large quantity of data economically and within a reasonable amount of time (Creswell, 2003). While much of the data were descriptive quantitative data, there were also qualitative data that required interpretation and analysis. The researcher is a full-time faculty member at one of the three colleges surveyed, but does not serve as a supervisor of any of the faculty studied. Working as a colleague of the faculty of this college may have influenced the number of responses, but should not

have influenced the feedback due to the anonymous nature of the study. The inability of the researcher to identify respondents and lack of interference of the researcher helped participants feel more comfortable reporting accurate and detailed information and removed issues of bias. Respondents did not feel they needed to answer a certain way to look good for the researcher, and the researcher could not distort the data collection or make inaccurate judgments during the data collection process (Trochim, 2001).

Setting

The setting for this study included 3 of 10 community colleges within a multicampus system, the Maricopa County Community Colleges District (MCCCD), in the southwestern United States. The MCCCD is considered one of the largest educational systems in the nation (Maricopa Community Colleges, 2001), providing educational and training services to more than a quarter million culturally diverse students every year. Maricopa County Community Colleges (2005, 2008a) assert that they are the largest single provider of postsecondary education and job training in Arizona, and are in the fourth highest populated and fastest growing county in the United States.

Student demographics across the 10 colleges are similar to the national statistics reported in chapter 2. Students range in ages from 15 to 90 years of age, women comprise 56% of the population, and the ethnic distribution of the student body as of fall 2005 was 58% Caucasian, 3% American Indian, 4% Asian, 5% African-American, 19% Hispanic, and 11% identified as other. Entering students take entry-level math, English, and reading tests to determine course placement in community college courses, and the

results are indicating that approximately 60% of entering students are underprepared for college-level work in one or more of those areas (Maricopa Community Colleges, 2005, 2008a). Faculty within these colleges experience the same teaching and learning issues as community college faculty across the nation.

Sample and Population

The overall sampling strategy used was single-stage, purposive sampling. Purposive sampling enables the researcher to specify the characteristics of a desired population and then locate individuals with those characteristics (Johnson & Christensen, 2004). The research questions to be answered by this study required input from community college faculty, therefore the specific characteristics of the desired population were people who were actively teaching as full-time community college faculty. Because the researcher had access to the names of a population of community college faculty to be studied, single-stage sampling was utilized as described by Creswell (2003) and the survey was distributed to the population directly without sampling groups or organizations first to find the desired population.

The population for this study included all full-time residential faculty at 3 of 10 community colleges within MCCCD in Arizona. Eligibility criteria required that the participants be employed as faculty members on a full-time basis, board-approved residential faculty, and actively teaching during the fall 2008 academic semester. This sample frame corresponded directly to the population this researcher wished to explore and describe.

Based on statistics obtained from the MCCCD Human Resources employee demographics (2008), there were 1,264 full-time faculty members across the district. The three colleges invited to participate in this study comprised three well-established colleges within the district, providing access to 653 full-time faculty. This study is descriptive and did not meet random sampling criteria, but 175 to 250 responses were desired. Fink (2006) indicated that larger samples reduce sampling errors, although she did not define how large a sample is adequate. Fowler (2002) reported that precision increases rather steadily up to sample sizes of 150 to 200 respondents. After that point, there is only a modest gain from increasing sample size according to Fowler. To help reach the desired sample size, the population was informed of the importance of the study when they were invited to participate and they received follow-up reminders during the study as outlined in the data collection section of this chapter.

Instrumentation

The instrument that was used to collect descriptive data on community college faculty teaching methods and their perceptions on teaching effectiveness was a self-report survey questionnaire formulated by the researcher (Appendix A). An extensive review of professional research and dissertation studies was conducted and several research and professional agencies were contacted to locate an existing study, including the American Educational Research Association (AERA), the Association for the Study of Higher Education (ASHE), the Carnegie Foundation for the Advancement of Teaching, the Lumina Foundation for Education, Western Psychological Services (WPS), the Stanford Institute for Higher Education, National Center for Postsecondary Improvement, the

National Center for Research to Improve Postsecondary Teaching and Learning (University of Michigan), the U.S. Department of Education Office of Educational Research and Improvement, the Seven Principles of Good Practice Resource Center at Winona State University, Advance-Ed, the League for Innovation in the Community College, and the American Association of Community Colleges (AACC). Additionally, *The Handbook of Tests and Measurements in Education and the Social Sciences* (Lester & Bishop, 2000) was reviewed and an appropriate survey instrument could not be found. Existing surveys that were found through all of the above resources either did not answer the questions this study intended to explore, were too oriented towards university faculty, or too oriented towards primary and secondary teachers and/or institutions.

Upon reviewing the literature and existing surveys, a list of tentative questions of interest was compiled, which was then critically reviewed to detect common flaws as recommended by Babbie (1990). While examining self-efficacy theory, many examples of questions that measure or indicate a person's self-efficacy were cited by Bandura (1997), contributing to the wording of the survey questions. Formatting and wording were further influenced by survey information compiled from Fink (2006), Fowler (2002), and Trochim (2001). This researcher took every step possible to ensure the survey questionnaire items matched the research objectives, were valid (determined through a pilot study and survey review by a panel of experts, discussed later in this chapter), and minimized bias by using carefully constructed survey questions. The research questions included:

1. What teaching methods are community college faculty using in the classroom within a large community college system in the southwestern United States?

2. How does this faculty evaluate student learning and their teaching effectiveness?

3. How does this faculty learn about the latest teaching and assessment methods, and what motivates them to do so?

The survey questions as they respond to each research question are outlined in Table 1.

Table 1

How the Survey Questions Relate to the Research Questions Explored

Research Question	Corresponding Survey Questions
Question 1	9, 10, 11, 12
Question 2	13, 14, 15, 16
Question 3	6, 7, 8, 17, 18, 19, 20, 21, 22, 23
Self-Efficacy Related Questions	9-13, 15-25

The research survey instrument consisted of four main parts and a total of 26 questions. Part one contained questions 1-8, which were multiple choice and fill-in-the-blank questions that collected background information on the community college faculty members. The intent was to collect and use this background data to determine any tendencies or patterns by various defining characteristics such as subject area taught, years of teaching experience, and highest degree earned. Questions 6-8 overlapped between background information and data in relation to how faculty learned about teaching and assessment methods.

Part two included questions 9-12, which inquired about community college faculty instructional techniques and methods utilized in the classroom. Questions 9 and 10 were multiple-answer questions using Likert-type scales. Likert scales are used to

measure attitudes and provide qualitative data that is descriptive. The Likert scale allows a researcher to determine what a person believes or perceives, and descriptive statistics can be performed, accompanied by a descriptive narrative (Mills, 2003). Questions 11 and 12 were open-ended qualitative questions used to gather rich, descriptive data to gain a more in-depth understanding of community college faculty instructional techniques, methods to increase student engagement, and determine a level of teaching self-efficacy and willingness to try new approaches in the classroom.

Part three consisted of questions 13-16, on faculty teaching assessment. Question 13 was related to student assessment, whereas questions 14 and 15 solicited faculty members' candid self-ratings on Likert-scaled questions. Question 16 was a reflective yet candid open-ended qualitative question to delve deeper into faculty self-assessment methods.

Part four included questions 17-23, related to faculty development. The questions combined Likert-scaled quantitative questions and open-ended qualitative questions as well, from which frequencies were run, sincere perceptions on faculty development were explored, and faculty views were ascertained on types and characteristics of faculty development that are deemed important or valuable to them. The survey had three final questions, 24-26, which conveyed general information as well as data related to self-efficacy and enjoyment of teaching.

Pilot Study

A pilot study of the survey instrument was conducted March 2008 through May 2008 on a population of 14 full-time faculty members in a similar setting to those that

were surveyed for this dissertation study. A pilot study enables the researcher to check for clarity in the questions as well as validity and reliability of the study (Babbie, 1990; Fink, 2006; Leedy & Ormrod, 2005). Content and face validity were important to establish to eliminate measurement errors that would result from irrevelent or inadequate measures (Brewer & Hunter, 2006). The data from the pilot study were compiled and analyzed to check for question clarity, content and face validity, as well as reliability. Descriptive statistics and qualitative analysis indicated that the process and questions were clear and the data gained were related to the research questions this researcher intends to answer.

The responses in the pilot study did indicate a need for revisions to some of the questions on the dissertation survey instrument. On the pilot study survey, the first question was a multiple choice question with options for the subject area in which faculty members taught. Several respondents wrote in their teaching area in the option labeled as "Other," even though their teaching area was a multiple choice option based on the way the colleges described teaching areas. For clarity, this question was changed on the final survey to a fill-in-the-blank that the researcher coded into the categories as described by the colleges after the surveys were collected. This question additionally asked if the teaching subject is academic or vocational in the dissertation instrument, since categorization varies among teaching areas and colleges.

The pilot study had two open-ended questions that were intended to gain different data about teaching activities as well as student engagement activities. Many of the responses to the two questions were the same, however, and several respondents left the second question blank, indicating a redundancy in questioning. The question asking

about teaching activities was refined in an existing multiple-option Likert-type scaled question, and the question on student engagement was left as an open-ended question format. A question relating to amount of time spent on teaching and extra-curricular activities was answered by all participants, but the data contained some extreme estimations. This question did not relate directly to the main research questions when analyzed, and was therefore eliminated. Finally, subparts a and b of question 23 on the pilot study received comments by two faculty to qualify their answers. The wording for these two subparts was revised to provide clarity and gain consistent interpretations of the question, as recommended by Babbie (1990).

Babbie described a pilot study as a miniature walk-through of the entire dissertation study, from sampling to reporting. The pilot study was conducted as a dissertation walk-through, and the pilot study clearly defined the process for the dissertation study. Johnson and Christensen (2004) recommended the collection of multiple sources of evidence to determine validity. As an additional means of validity evidence, the adjusted survey was reviewed by a panel of experts (Appendix B). The panel of experts included two research professionals from a community college office of institutional effectiveness, and a professional research faculty member who has conducted and taught research at both the community college and university level. None of the panel of experts were part of the pilot study.

Since this survey instrument was new, it did not have any proven reliability. The results from the pilot study did demonstrate that the desired type of information was being collected as evidenced in the responses to the survey questions. To establish internal consistency reliability, a Cronbach's alpha, or coefficient alpha, was calculated

on responses from the pilot study utilizing the Statistical Package for the Social Sciences (SPSS) software on the Likert-type scaled questions relating to the categories of teaching, assessment, and faculty development. An item analysis was run on questions that could be measured numerically and were not based on perception only. The Cronbach's alpha based on standardized items averaged .804. According to Johnson and Christensen (2004), a general rule of thumb is that the Cronbach alpha should be greater than or equal to .70 for general research purposes. To gain additional reliability, the survey contains reverse-scored questions to further test the consistency and reliability of responses related to attitudes and opinions.

Data Collection

Before the surveys were sent, permission was received from the Vice President of Academic Affairs of each participating college, the MCCCD Institutional Review Board (IRB) office, and the Walden University IRB office. The surveys were placed in each full-time residential faculty member's college mailbox. This ensured that all faculty were invited to participate in the study, and that only full-time faculty were invited since part-time faculty and non-faculty members have distinct mailboxes.

Participants were given 3 weeks to return the survey. A self-addressed stamped envelope was provided along with the survey questionnaire to ensure faculty were comfortable that the information was going to the researcher and would be confidential and anonymous. To gain the best response rate possible, an invitation letter (Appendix C) was sent a couple of days in advance telling participants the purpose and importance of the survey and informing them that the survey is coming to motivate them to

participate. This letter was followed by the survey itself, which was accompanied by a cover letter and consent form (Appendix D). Participants were offered a summary of the findings when completed if they wish. The questionnaire procedures were straightforward, and a self-addressed stamped envelope was provided for ease in returning the surveys. A follow-up reminder (Appendix E) was sent 7-10 days after the survey was distributed to encourage those who had not yet responded to complete and return the survey, as recommended by Fink (2006) and Leedy and Ormrod (2005). The follow-up reminder reiterated the purpose and significance of the survey, and the importance of the faculty members' participation to obtain the most accurate and reliable data. Surveys were dated as received to track daily counts and to determine the rise and drop of returns as recommended by Babbie (1990).

Data Analysis

Descriptive statistics were used to analyze the collected descriptive data. Descriptive statistics are commonly used in survey studies (Fink, 2006; Weimer, 2006) and comprise frequencies, percentages, measures of central tendency (the mean, medium, and mode), as well as measures of variation, such as range and standard deviation (Fink, 2006). According to Johnson and Christensen (2004), frequency distributions are a "systematic arrangement of data values in which the data are rank ordered and the frequencies of each unique data value are shown" (p. 436). Measures of central tendency enable the researcher to provide a single numerical value most typical of all the values of a quantitative variable. The mean, or average, offers a general picture of the data without having to look at an entire data set. The median demonstrates where the study responses

stand in comparison to other study items. Finally, a measure of variability provides information about how expansive the data values are, or how similar or different the respondents' answers are (Johnson & Christensen, 2004).

SPSS software was used to input, code, and summarize the descriptive data. Frequencies, percentages, measures of central tendency, and measures of variation were calculated. Microsoft Word software was used to input, code, and summarize the qualitative data. Six steps outlined by Creswell (2003) were used in analysis and interpretation of the qualitative data. These include organizing and preparing the data for analysis, reading through all the data to gain an overall sense of the information, analyzing and coding information into similar categories, allowing themes to emerge from the coding process, advancing the description and themes into a narrative, and finally, interpreting the data to provide meaning.

Ethical Considerations

The rights of participants were protected during all stages of the study, including data collection, data analysis and interpretation, as well as the writing and dissemination of the research. According to Creswell (2003) and Fink (2006), participants should not be put at risk, they should have the right to participate voluntarily and withdraw at any time, they should understand the purpose and procedures of the study, and they should understand how the researcher will provide anonymity and confidentiality, among other ethical considerations. Additionally, permission of the individuals in authority should be gained prior to starting the data collection to gain access to study participants at research sites.

Several steps were taken to secure the ethical protection of the research participants. All of the materials and the research design methodology utilized in this study were reviewed by the researcher, the dissertation committee, the MCCCD IRB, and the Walden University IRB (approval number 09-23-08-0308395) to ensure all ethical considerations are accounted for and to receive approval to conduct the research. Permission from the Vice President for Academic Affairs of each participating community college was obtained prior to the study, granting the researcher access to their faculty members for participation in the study.

Participants were given a consent form to review prior to participation. Contact information was provided so that they could reach the researcher, the researcher's advisor, or the Director of the Research Center at Walden University if they had any questions or concerns about the survey or the study. Informed consent from the respondents was implied upon their voluntarily returning the anonymous and confidential written survey. Participants will be kept anonymous, and the data will be stored in a locked file and on a personal computer at the researcher's home for 5 years after the dissertation is approved. Only the researcher will have access to the collected data.

Summary

This chapter described the research design and methodology to explore instructional techniques, assessment methods, perceptions on teaching effectiveness, as well as perceptions on faculty development activities and motivations for learning and trying new teaching methods in the community college classroom. The setting, sample, and population were addressed, in addition to the research questions, design of the survey

instrument, pilot study, data collection, statistical treatment of data, and ethical considerations for protection of the participants' rights.

The results of the data collection and analysis are presented in detail in chapters 4 and 5. The data indicate that, contrary to the literature, faculty are using other instructional methods than just lecture to reach their students. Additionally, faculty recognize that their learning and implementation of new teaching strategies improves student learning. Despite feeling limited on time for faculty development, faculty plan to participate in professional development activities to improve student learning.

CHAPTER 4:

RESULTS

Introduction

This study examined a group of community college faculty about how they view their teaching methodologies and the effectiveness of these methodologies on student learning. The study included views of their teaching styles, effectiveness in achieving student learning and retention, activities to engage students, questions on what motivates them to improve their teaching, and questions on why they teach. This chapter presents the results, which are organized in order of faculty background information followed by the data pertaining to the three basic research questions posed in chapter 1.

1. What teaching methods are community college faculty using in the classroom across several campuses within a large community college system in the southwestern United States?

2. How does this faculty evaluate student learning and their teaching effectiveness?

3. How does this faculty learn about the latest teaching and assessment methods, and what motivates them to do so?

For each topic, the results of the descriptive statistics are reported first, followed by the qualitative data.

Faculty Demographic Analysis

A total of 653 full-time residential faculty from three colleges were invited to participate in this study. Surveys were received from 185 participants, yielding a 28%

response rate. There were 83 male respondents (45%) and 102 female respondents (55%). College A consisted of 99 faculty, from which 16 men and 14 women responded, yielding a total of 30 participants or a 30% response rate. College B consisted of 315 faculty, from which 33 men and 45 women responded, yielding a total of 78 participants or a 25% response rate. College C consisted of 239 faculty, from which 34 men and 43 women responded, yielding a total of 77 participants or a 32% response rate. While the data were recorded separately by college and gender, in general, there was less than a 10% difference in responses by college or gender. Therefore, data is presented as a whole and differences are referred to in those sections where more substantial differences exist.

Survey results indicated that the respondents taught across all major disciplines, both in general education, and in career and technical fields. When asked about their academic preparation, 28% of the participants indicated that they held doctoral degrees, 68% held master's degrees, and 3% held bachelor's degrees (Table 2). Twenty-two of the respondents (12%) are pursuing a higher level degree to increase their professional development, salary, and to open up future administrative leadership opportunities. The percentage of masters' and doctoral level degrees was similar across college and gender with the exception of college B. College B had a lower overall percentage of female respondents currently holding doctoral degrees. Of the 22 faculty members pursuing a higher level degree across all three colleges, 55% were from college B, and 8 of those 12 respondents (67%) were female.

Table 2

Subject Areas Taught Plus Level of Academic Achievement (Survey Questions 1 and 4)

		Educational Degree Level			
Subject	Respondents	BS/BA	Master	Doctoral	Prof.
Mathematics*	20		12	7	
English/ESL/Reading/Com/Language	33		21	12	
Counseling/Library	8		6	2	
Education/Child & Family Studies	5		2	3	
Humanities/Arts/Fine Arts	10		5	5	(1 dual)
Social, Natural, Behavioral Sciences	37	1	21	14	1+ (1 dual)
Health Professions/Health Sciences	15		14	1	
Computer Science/Information Tech.	11	2	7	2	
Business/Fin/Acct/Marketing/Mgmt.	11	1	9	1	
Auto/Fire/AJS/EMT/Nutrition/Wellness	16		15		1
Unknown Career/Technical	6	1	3	2	
Unknown Academic	13		11	2	
n =	185 100%	5 2.70%	126 68.11%	51 27.57%	2 + 2 dual 1.08%

* One mathematics faculty member listed degree level as Associate degree only.

A review of teaching experience showed a balanced mix of those teaching less than 10 years or more than 10 years at their present institutions. Most faculty have taught elsewhere prior to teaching at their present institution, however, and only 6% of respondents have taught for 5 years or less overall, 17% have taught 6 to10 years overall, 37% have taught 11 to 20 years overall, and 40% of the respondents have taught 21 years and greater overall (Table 3).

Table 3

Number of Years Teaching Experience (Survey Questions 2 and 3)

Years at Present College	*n*	Years Teaching Overall	*n*
1-5	38 (21%)	1-5	11 (6%)
6-10	56 (30%)	6-10	32 (17%)
11-20	64 (35%)	11-20	68 (37%)
21+	27 (14%)	21+	74 (40%)

Participants were asked where they learned about teaching and assessment. Sources of learning in rank order of teaching included trial and error in the classroom (84% teaching, 69% assessment), colleagues (79% teaching, 69% assessment), previous teaching employment (60% teaching, 45% assessment), formal degree coursework (56% teaching, 48% assessment), internal training workshops (52% teaching, 47% assessment), and external course work related to teaching and learning (49% teaching, 41% assessment). Results demonstrate a frequency of 732 responses to forms of learning about teaching, compared to 606 responses to learning about assessment. This presents 126 (17%) fewer learning experiences related to assessment compared to teaching. Trial and error in the classroom and learning from colleagues were the two methods mentioned most often about how faculty learned about both teaching and assessment techniques. It was not their formal degrees, formal training, or campus or district training. This finding corresponds to the literature reported in chapter 2 that faculty are not always hired as trained educators.

Responses Related to the Research Questions

Research Question 1: What teaching methods are community college faculty using in the classroom within a large community college system in the southwestern United States?

Faculty were asked about the types of instructional methods they utilized in the classroom and percentage of time they spent on each in survey questions 9-12. While 98% of the respondents reported that they do use lecture, 95% mentioned they use other instructional methods as well. In general, the respondents are combining lecture with at least three to four other teaching methodologies, including discussion, student presentations, group activities, labs, and hybrid or online classroom alternatives. Hybrid and online methods are not utilized frequently by the respondents, with only 33% using these instructional methods to some degree (Table 4).

Survey question 10 utilized nine sub-questions based on what the literature reviewed in chapter 2 states that faculty are doing or should be doing in relation to teaching using a 5-point Likert-type scale (Table 5). Combined responses indicated that faculty use lecture often (53%), but also use diverse teaching strategies always (26%) or often (47%), and they use different techniques depending on the students always (18%) or often (46%). Faculty also indicated that they accept errors as a part of the learning process always (60%) or often (31%), they encourage dialog among their students in the classroom always (57%) or often (29%), and they try to find out about their students' learning styles, backgrounds, and interests always (30%) or often (35%).

Table 4

Percentage of Time Spent on Current Instructional Methods (Survey Question 9)

Instructional Method	Never	1-25%	26-50%	51-75%	76-100%	*n*
Lecture	2 1.08%	54 29.19%	65 35.13%	44 23.78%	17 9.19%	182 98.38%
Discussion	2 1.08%	98 52.97%	54 29.19%	17 9.19%	5 2.71%	176 95.13%
Student presentations	32 17.30%	108 58.38%	8 4.32%	6 3.24%	0 0.00%	154 83.24%
Group Activities	6 3.24%	104 56.22%	42 22.70%	8 4.32%	7 3.78%	167 90.27%
Lab Teaching	54 29.19%	39 21.08%	34 18.38%	13 7.03%	3 1.62%	143 77.30%
Videos/DVD	30 16.22%	102 55.13%	7 3.78%	1 0.54%	1 0.54%	141 76.22%
Hybrid/Online Format	61 32.97%	39 21.08%	13 7.03%	5 2.71%	4 2.16%	128 69.19%
Other	-	6 3.24%	2 1.08%	1 0.54%	-	9 4.86%

Note: Due to the variance in time spent on each instructional method, rank order was not possible. Instructional methods are listed in the same order as they appear on the survey.

Table 5

Incorporation of Teaching Strategies (Survey Question 10)

Instructional Strategy	1 Always	2 Often	3 Occ.	4 Rarely	5 Never	*n*
I accept errors as a natural part of the learning process	111 60.00%	58 31.35%	13 7.03	1 0.54%	-	183 98.92%
I revise my courses	90 48.65%	76 41.08%	18 9.737%	-	-	184 99.46%
I encourage dialog among my students	105 56.76%	53 28.65%	21 11.35%	4 2.16%	-	183 98.92%
I use diverse teaching strategies	49 26.49%	87 47.03%	39 21.08%	8 4.32%	-	183 98.92%
I use different techniques depending on the students	34 18.38%	88 47.57%	47 25.40%	13 7.03%	1 0.54%	183 98.92%
I try to find out about my students' learning styles	55 29.73%	64 34.59%	40 21.62%	22 11.89%	1 0.54%	182 98.37%
I use lecture as the best method	13 7.03%	98 52.97%	56 30.27%	12 6.49%	3 1.62%	184 99.46%
I allow students to participate in decisions	9 4.86%	31 16.76%	57 30.81%	62 33.51%	26 14.05%	185 100%
I use one basic teaching method	8 4.32%	28 15.13%	37 20.00%	74 40.00%	38 20.54%	185 100%

Note: See survey (Appendix A) for full instructional strategy sub-questions.
Instructional strategies are listed in rank order based on a combined total of responses to Always and Often.

When comparing male to female faculty responses, there were some differences that are noteworthy. In relation to using lecture as the best method for presenting subject material to students, 71% of the male respondents indicated always or often, whereas only 53% of females indicated always or often. About half of the male respondents indicated that they rarely or never use only one teaching method. In contrast, more than two-thirds of the female respondents indicated that they rarely or never use only one method. Female faculty were more likely to use diverse teaching strategies, different teaching techniques, encourage dialog among students in the classroom, find out about student learning styles, interests, and backgrounds to incorporate into their teaching, and revise courses by an average of 10-14% more than their male colleagues.

Questions 11 and 12 were open-ended qualitative questions designed to gain a better understanding of what teaching methods community college faculty use in the classroom, how they engage their students, and how they have changed their approach to teaching over time. When asked how they engage students, faculty provided an array of teaching methods they use to engage students that demonstrate they are incorporating more than just lecture into the classroom. Responses were categorized by types of teaching activities and ordered by frequency of responses (Table 6).

The responding faculty indicated that they used interactive techniques to engage their students. Forty-one percent indicated they use some form of active questioning techniques and 32% indicated they use discussion activities. Faculty included that their discussion activities are intended to be guided and thought-provoking. Moreover, 37% of the faculty are incorporating group activities to build community and teamwork and 31% are integrating active learning exercises, discovery activities, and educational games to

reach their students who are diverse in age, race, culture, and academic capability or preparedness. Several faculty commented that they connect learning to real world experiences or experiences that are meaningful to the students. One faculty member finds "first, that being excited about your own subject is contagious, and second, find a 'hook' to connect them [students] to the subject so they 'own' it and feel more connected."

Table 6

How Faculty Engage Their Students (Survey Question 11)

Category	Frequency
Questioning of students/Q&A sessions/ positive feedback	76 (41%)
Group activities (interactive)/team building	68 (37%)
Discussion/interactive group discussions	60 (32%)
Active learning/exercises/labs/simulations/discovery/games	58 (31%)
Timely/ relevant/current topics/lecture/examples/demonstrations	38 (21%)
Utilize diverse teaching strategies and assignments	34 (18%)
Trusting classroom environment/know student names/interests	23 (12%)
Problem solving exercises/problem-based learning/critical thinking	22 (12%)
Student presentations/individual or group	21 (11%)
(Faculty)High energy/enthusiasm/humor in the classroom	15 (8%)
Feedback in class/one-on-one discussions or group	14 (8%)
Incorporate technology: online/hybrid/i-clickers	14 (8%)
n =	443

When asked in an open-ended question how they have changed their approach to teaching over time, 29% of the faculty indicated they are more apt to vary teaching styles, 20% responded that they incorporate more technology, 18% indicated they lecture less to accommodate other methods of teaching, and 12% responded that they incorporate more interactive and hands-on types of activities. Only 2% of the responding faculty members stated that they continue to use traditional lecture, and they identified they do so because teaching fads come and go but lecture remains reliable. Examples of activities that faculty have incorporated as they have changed their approach to teaching began to mirror the responses on how faculty reported they engage their students, indicating that the activities they use to engage students are teaching activities that they have added since they started teaching, and that faculty are aware of the change in student needs and are trying new things to accommodate learning needs.

Many of the individual responses indicated that faculty are less of a "sage-on-the-stage" and are more of a "guide-on-the-side" and facilitator of learning. Faculty responded that they try to understand the learner's perspective more, they are more flexible due to the diversity of their students, they are more aware of student diversity and more prepared for that diversity, they focus more on student needs, incorporate hands-on learning, include more problem-solving activities, cover less material but more in-depth for deeper learning, ensure that projects are meaningful, adjust the pace based on the group, and are more tolerant of remedial teaching than in the past. One faculty member is more focused on students as individuals rather than classroom management. Faculty additionally indicated they are constantly changing. One buttressed that thought by stating that what works one semester or with one group may not work will with the next.

Faculty identified that they incorporate learner-centered or student-centered activities much more and that they utilize a lot of active strategies. They utilize lecture less and require more active participation from the students. One faculty member commented positively that he is less accommodating of irresponsible student behavior and that they hold students, not teachers, responsible for student performance. This brings forward an important point. Faculty can change their approaches in how they present material and assess learning, but it is ultimately the students who must be responsible for their own performance.

Another respondent newer to teaching wrote "Great question…hmmm?? I guess I need to change more." Several faculty also commented in person after returning the survey that they found the questions very thought provoking and great for reflection on their activities. One even asked for a clean copy of the survey for reflection purposes. This was an unwritten goal of the researcher: To have faculty reflect on what they do to hopefully inform and inspire their activities in the classroom.

While most responses were positive, 10% of the respondents did cite a need to slow down the pace, require less of students, and do more remedial teaching than in the past due to the type of student in the classroom today. This low percentage of negative responses is encouraging, given that national statistics indicate 41% of community college students are underprepared (Byrd & MacDonald, 2005). MCCCD statistics indicate 60% of their students are underprepared in one or more areas of English, math or reading (Maricopa Community Colleges, 2005, 2008).

Overall, the data gathered in relation to Research Question 1 indicate that while faculty are using a lecture format, they are using other instructional methods as well to

reach the diverse 21st century student. While the literature reports that university faculty predominantly use lecture as their primary teaching method (Barrington, 2004; Colbeck et al., 2002), more than 65% of the faculty within the MCCCD system in the southwestern United States are always or often finding out about their students' learning styles, backgrounds, and interests to incorporate into their teaching, and more than 73% are using diverse teaching strategies always or often. Open-ended qualitative questions revealed that faculty are incorporating group activities, interactive discussions, and active learning activities to engage students, as well as incorporating questioning techniques to engage students and test for learning. Many responses indicated that faculty are aware of their students' diverse learning needs and are doing what they can to incorporate various strategies to reach and teach them.

Research Question 2: How does this faculty evaluate student learning and their teaching effectiveness?

Faculty were asked how they evaluate student learning and their teaching effectiveness in survey questions 13-16. Question 13 inquired about student course grade determination, and faculty indicated that they are utilizing a variety of methods to assess student grades. These methods include attendance and participation, quizzes and exams, labs and clinics, oral presentations, research, group or team projects, service learning, portfolio development, and online activities. Quizzes and exams had the highest frequency response for determining grades (81% use quizzes and exams to some degree), although according to training and education questions on the survey, relatively few responding faculty have had training in writing or assessing quizzes and exams.

Faculty were asked to what extent they agree or disagree on the effectiveness of college and district methods of faculty evaluation of their performance. When responding to whether or not current administrative faculty methods accurately measure teaching effectiveness or the Faculty Evaluation Process (FEP) is beneficial and makes faculty better at their job, 54% responded that they disagree or strongly disagree, 40% responded that they agree or strongly agree, and 6.5% were undecided. A better assessment tool according to the data is the college student evaluation form, where 69% agree or strongly agree the form provides effective feedback compared to 25% who disagree or strongly disagree. As with the above methods, 6% were undecided. Student evaluations are the main method in which faculty are evaluated, and while the student evaluation survey is not very specific to faculty teaching methods, more than 72% of respondents agree or strongly agree that student opinions are helpful and should be used in evaluating teaching effectiveness of faculty. Overall, when questioned about needing better ways to evaluate teaching performance, 74% agree or stongly agree that better ways are needed, compared to only 14% who disagree or stronly disagree. There were 11% of faculty who were undecided in this category (Table 7).

When comparing the three colleges' responses separately, College C had an unusually high number of undecided responses across all categories, especially from the male resondents, who were 9-21% undecided. College B had a 6-12% undecided response rate for the last two sub-questions about a need for better ways to evaluate teaching and whether or not student opinions should be used in evaluating teaching. College A had relatively few undecided responses.

Table 7

Perceptions Relating to the Value of Current College Assessment Methods. (Survey Question 14)

Value of Current Assessment Methods	1 Strongly Disagree	2 Disagree	3 Agree	4 Strongly Agree	5 Undecided	*n*
We need better ways to evaluate teaching	3 1.62%	23 12.43%	74 40.00%	63 34.05%	20 10.81%	183 98.92%
Student opinions should be used in evaluating teaching	9 4.86%	26 14.05%	94 50.81%	40 21.62%	15 8.11%	184 99.46%
The student evaluation forms provide me with effective feedback	12 6.49%	34 18.38%	85 45.95%	43 23.24%	11 5.95%	185 100%
Current evaluation methods provide feedback that is helpful	25 13.51%	61 32.97%	72 38.92%	13 7.03%	12 6.49%	183 98.92%
Current evaluation methods accurately measure my teaching	29 15.68%	68 36.76%	66 35.68%	9 4.86%	12 6.49%	184 99.46%
The FEP process is beneficial to me	29 15.68%	72 38.92%	67 36.22%	8 4.32%	9 4.86%	185 100%

Note: See survey (Appendix A) for full instructional strategy sub-questions.
Values are listed in rank order based on a combined total of responses to *Agree* and *Strongly Agree*.

When asked about their perception of how they would rate their own teaching, 70% rated themselves above average, 22% of the respondents rated themselves as superior, and 7% rated themselves as average. Responses as to how these faculty thought students would rate their teaching were similar. When rating their colleagues, 68% of the faculty identified their colleagues as above average, 18% as average, and 8% as superior. When asked how faculty felt students would rate their colleagues, there was an 8%

reduction in the above average and superior responses, and an 8% increase in the average responses.

Survey question 16 was an open-ended question asking faculty how they evaluate their own teaching effectiveness. The 337 responses were compiled into 10 main categories. Based on frequency results, the majority of faculty indicated that they utilize student grades and performance (49%) while others report using student feedback and comments (35%), student evaluations (32%), observation of the level of engagement or participation of students (15%), and faculty evaluations or peer feedback to evaluate their teaching effectiveness (15%), followed by five additional evaluation categories (Table 8).

In addition to evaluating student performance, faculty indicated they evaluate growth in student confidence and comprehension, or that they have students complete student personal success ratings at the end of the semester. Many utilized a combination of attendance, performance, retention, engagement, and student evaluation, feeling that a combination of measures ensures greater accuracy in self-determination of teaching effectiveness.

The data gathered in relation to Research Question 2 do indicate that faculty are using a variety of methods to assess student learning and their own teaching effectiveness. One-half of the respondents did not feel, however, that administrative evaluation methods and the district Faculty Evaluation Process (FEP) are effective, and an additional 5-6% were undecided. Furthermore, 74% reported that better ways to evaluate teaching performance are needed. Qualitative data provided 337 responses as to how faculty evaluate their own teaching effectiveness, providing them their own methods to reflect upon and improve the teaching and learning process.

Table 8

How Faculty Evaluate Their Own Teaching Effectiveness (Survey Question 16)

Category	Frequency
Based on student grades/performance	91 (49.2%)
Student feedback/comments	65 (35.1%)
Student evaluations/surveys/personal course assessment forms	60 (32.4%)
Observation of level of engagement/participation/attention of students	27 (14.6%)
Faculty evaluations/peer feedback	27 (14.6%)
Post-graduation/post-course student success	17 (9.1%)
Based on student questions/dialog/rapport	16 (8.6%)
Pre-and-post assessments	13 (7.0%)
Student attendance/retention in courses	12 (6.5%)
Self reflection/always try to improve	9 (4.9%)

Research Question 3: How does this faculty learn about the latest teaching and assessment methods, and what motivates them to do so?

Faculty were asked about the types of instructional and course management professional development they have had, what training would be helpful to facilitate student learning, and what motivates them or prevents from attending professional development opportunities in survey questions 17-23. Questions 7 and 8, which were reviewed earlier under faculty demographics, also relate to this research question and verified with the literature that not all faculty have been trained to be educators.

When asked whether faculty have had training on various methods of teaching and whether or not they found that training beneficial, the majority found the training they had attended beneficial. Of those that had training in classroom instruction, varied teaching methodologies, and student centered learning, 88-91% of the respondents agree or strongly agree these trainings were helpful in their teaching. Of those that had training in assessment of student learning, the development of critical thinking skills in students, and differences in learning among students, 84-88% of the respondents agree or strongly agree these trainings were helpful to their teaching. Student-centered learning, development of critical thinking skills, and educational theory were the three areas in which the fewest respondents had training (64-67%). Educational theory scored the lowest in helpfulness, although of those that had training in educational theory, nearly three-fourths agreed or strongly agreed that it was helpful in their teaching. None of the scores related to helpfulness were by any means "low."

When comparing male to female responses, female respondents had up to a between a 4-19% higher response rate for having attended training in all categories inquired about with the exception of training in varied teaching methodologies. Male faculty had a 5% higher training rate in this category alone. Male and female faculty responses to the effectiveness of training were similar.

Significantly fewer responding faculty (19%) have had training on course management compared to methods of teaching. Course management included writing a syllabus, creating course materials, writing tests, assessing test effectiveness, evaluating student performance, using computers for online or hybrid courses, and using instructional resources. Of the faculty who have had training on course management,

again, most found the training beneficial (88-98%). While quizzes and tests were identified as most used by faculty to determine student grades in the assessment section, this is the area in which they have received the least training. Only 41% of respondents had training on writing tests, and 43% had training on assessing test effectiveness. A higher number of respondents (59%) did have training in evaluating student performance in general. Use of instructional resources had the highest number of respondents overall that indicated they have had training, followed by writing a course syllabus, creating course materials, and using computers for online/hybrid courses (Table 9).

Table 9

Comparison of Instructional Training to Course Management Training (Survey Questions 17 and 18)

Instructional Training	Yes Responses	Agree/ Strongly Agree	Course Management	Yes Responses	Agree/ Strongly Agree
Varied Teaching Methodologies	146 78.92%	131 89.73%	Instructional Resources	121 65.40%	106 87.60%
Classroom Instruction	142 76.76%	129 90.85%	Evaluating Performance	109 58.92%	100 91.74%
Differences in Learning	139 75.13%	122 87.77%	Writing a Syllabus	108 58.38%	100 92.59%
Assessment of student learning	135 72.97%	114 84.44%	Creating Course Materials	97 52.43%	92 94.84%
Student-centered learning	124 67.03%	109 87.90%	Computers for Online/Hybrid	93 50.27%	81 87.10%
Critical Thinking Skills	120 64.86%	104 86.67%	Assessing Test Effectiveness	80 43.24%	71 88.75%
Educational Theory	120 64.86%	87 72.50%	Writing Tests	75 40.54%	67 89.33%

Note: Instructional training and course management options are rank ordered by number of yes responses.

Faculty were asked an open-ended question about what professional development would be helpful for them to facilitate improved student learning. Responses included technology training including time and support to implement the technology after the training is completed (22%), writing tests and assessing test effectiveness (16%), innovative approaches to teaching diverse students (11%), student engagement and understanding the 21st century student (6%), instructor led "best-practices" workshops (6%), professional workshops, conferences, or MCLI trainings (6%), discipline-specific educational training relevant to the classroom (4%), critical thinking development and problem solving (3%), and new techniques that have proven, positive impact on student performance (2%). Eight respondents (4%) identified that at this point in their career they did not feel like they needed any further training and that no professional development activities were of interest to them. One faculty member commented that he hoped anyone hired to teach full-time was already competent. Another noted that she attends workshops that promote student learning and try to hold high standards and create an atmosphere of critical thinking, but has difficulty working with students who have had other instructors with low expectations and who have rewarded students for little effort.

To gain insight on faculty motivation, faculty were asked what would motivate them to participate in professional development activities to learn new methods and improve student learning. The largest frequency of responses related to time (44%). Faculty indicated they are very busy and needed more free time to attend training. Comments suggested that the colleges need to offer more convenient times since most trainings conflict with teaching schedules, more convenient locations or on campus so it did not take time to travel to off-site locations, and also more time and support to

implement a newly learned teaching style or technology into the classroom. Faculty identified that implementing a new technique takes a lot of time beyond just attending a training session. There should be support and recognition for implementing, and possibly pay such as in the case of converting a face-to-face course to an online or hybrid course.

Other responses included receiving professional growth credit or some kind of reward or recognition, especially for those who are Ph.D.s or at the ceiling for pay incentives (13%). Many faculty (11%) indicated they would be motivated by training on methods that were proven to work, had clear outcomes, and would simplify teaching techniques. Ten faculty (5%) commented that there used to be a "Master Teacher" series and that they would like to see this brought back, while an additional 4% responded that they would like to see training that can be realistically applied in the classroom with useful relevant topics. Several faculty (5%) commented that campus and district trainings should be offered by professional trainers that model the technique being presented. They did not feel that lecturing about a new or innovative technique was effective, and that the technique should be modeled. This demonstrates that for effective learning purposes, even faculty want to be taught in methods other than just lecture. Faculty commented that a sense that their time would be well spent and their teaching would be enhanced would be motivational. One faculty member stated that "This is an expected professional obligation." While this would seem to be true, responses did not indicate that all faculty have this same belief.

When asked what obstacles keep them from attending professional development opportunities, the most mentioned obstacle was time, with 57% of the faculty responding that they have a lack of time to participate due to teaching load, grading, committee work,

and job overload. Several faculty (4%) specifically identified that they were "too exhausted" to attend training due to the number of activities for which they are responsible. More than 29% of the faculty indicated that the times training sessions are offered are not convenient due to teaching schedules. Additional obstacles included location, subject matter offered, lack of qualifications of the trainers, and a feeling that administration does not support training and improvement in the classroom. One faculty member commented that "good teaching is largely a matter of paying attention and new technologies only do so much."

Respondents were asked about their perception of the value of their faculty development efforts. While only 37% of faculty agree or strongly agree that good teaching is rewarded and only 43% of faculty agree or strongly agree that efforts to try new things in the classroom are rewarded, 71% felt that participation in campus training activities was beneficial to them personally. More importantly, 97% agree or strongly agree that they can positively affect student learning and 90% agree or strongly agree that their learning and implementing new teaching strategies improves student learning. Reverse-scored questions affirm these perceptions as can be seen by data stating that 94% of faculty disagree or strongly disagree that their teaching style does not impact student learning, 78% disagree or strongly disagree that new teaching strategies are generally fads and not worth their time to learn and implement, and 74% disagree or strongly disagree that faculty development opportunities are generally a waste of time (Table 10).

Table 10

Perceptions Relating to the Value of Faculty Development Efforts (Survey Question 21)

Value of Current Assessment Methods	Strongly Disagree	Disagree	Agree	Strongly Agree	Undecided	*n*
I can positively affect student learning	1 0.54%	-	42 22.70%	137 74.05%	3 1.62%	183 98.29%
My learning new teaching strategies improves learning	1 0.54%	8 4.32%	56 30.27%	111 60.00%	8 4.32%	184 99.46%
Participation in campus training activities is beneficial to me	4 2.16%	31 16.76%	94 50.81%	38 20.54%	16 8.65%	183 98.92%
Adequate mentoring and support are available for newer instructors	16 8.65%	58 31.35%	56 30.27%	30 16.22%	21 11.35%	181 97.84%
Efforts to try new things are rewarded	15 8.11%	71 38.38%	57 30.81%	23 12.43%	15 8.11%	181 97.84%
Good teaching is rewarded	20 10.81%	76 41.08%	50 27.03%	19 10.27%	18 9.737%	183 98.92%
Faculty development opportunities are a waste of time	43 23.24%	83 44.86%	32 17.30%	4 2.16%	23 12.43%	185 100%
New teaching strategies are fads and not worth my time to learn	44 23.78%	90 48.65%	21 11.35%	5 2.70%	25 13.51%	185 100%
My teaching style does not impact student learning	84 45.40%	86 46.74%	9 4.86%	3 1.62%	2 1.08%	184 99.46%

Note: Value of current assessment methods are listed in rank order based on a combined total of responses to Agree and Strongly Agree.

As a result of faculty beliefs that training activities are beneficial to them personally, over the next 2 years 78% of the respondents plan to enhance and expand their classroom teaching and learning techniques, 65% plan to learn a new technology, and 52% plan to travel to a professional conference on teaching and learning. Only 5% of the respondents have no plans for further faculty development (Table 11).

Table 11

Faculty Development Plans in the Next Two Years (Survey Question 22)

Faculty Development Activity	Frequency
Enhance/expand my classroom teaching techniques	145 (78%)
Learn a new technology for use in the classroom or to aid my teaching	120 (65%)
Travel to a professional conference on teaching and learning	96 (52%)
Attend more campus workshops on teaching and learning	84 (45%)
Learn how to develop/teach online or hybrid courses	75 (41%)
Increase my knowledge in learning styles to increase student learning	69 (37%)
Other	12 (6%)
No changes are planned for the next two years	9 (5%)

Faculty were fairly equally dispersed in the number of years to planned retirement, with 26% ready to retire in 0-5 years, 24% in the next 6-10 years, 29% in 11-20 years, and 16% not planning retirement for more than 20 years. There were 7 respondents (4%) that either did not respond or wrote they never want to retire. Ninety-seven percent of the respondents indicated that if they had it all to do over again, they

would choose a teaching career. Faculty reported they teach because they have a passion for teaching, it is enjoyable, rewarding, fulfilling, they love working with students, they want to make a difference in their students' lives, and they are excited and passionate about their subject area and about educating people (Table 12).

Table 12

Why Faculty Teach (Survey Question 24)

Category	Frequency
[Love] To help students learn/provide valuable knowledge/ student success	57 (31%)
I love it/passion for teaching	52 (28%)
To make a positive difference in peoples' lives/ help students achieve goals	41 (22%)
I like/enjoy it	26 (14%)
I feel rewarded when students succeed/its fulfilling	18 (10%)
Seeing the light bulb go on energizes/excites me	16 (9%)
I enjoy/love my subject	14 (8%)
I love learning myself	13 (7%)
Good way to make a living [combined with other positive responses]	10 (5%)
It was my destiny/calling	8 (4%)
Love the freedom to create my own classes/create new materials/always improve the class	6 (3%)

One faculty member used to enjoy teaching more, but felt that students now are so underprepared it is not as enjoyable as it used to be. Another commented "I consider it an honor to help those who are sincerely trying to learn and grow." Faculty made comments that teaching is the best thing they have ever done, they feel like they are using their life to make the world a better place, they love empowering students, it is great to be able to encourage students to believe in themselves, and they love being part of a community of people who value knowledge and intellectual discussion. Faculty pointed out that, overall, the internal rewards justify the effort. This is a good indicator as to why many faculty do take the extra time and effort to learn and implement new teaching methodologies to improve student learning even though they feel that the institution does not provide adequate reward. As was indicated by Colbeck et al. (2002), faculty go into this career because they are intrinsically motivated.

Research Question 3 asks how faculty learn about the latest teaching and assessment methods and what motivates them to do so. The data indicate that approximately three quarters of the faculty surveyed have had training on instructional methods but only 40-65% have had training on course management and assessment. On average, 88% of those that have had training agree or strongly agree that the training has been helpful to their teaching. Many motivators and obstacles were identified on what would motivate faculty to learn about the latest teaching and assessment methods. Time was the largest obstacle. Not surprisingly, providing more free time and more convenient training times (followed through with support) was the largest motivator. Data did indicate that faculty felt training was beneficial to them personally and helps them improve student learning. Perhaps college professional development coordinators,

trainers, and administrators should weight these data more heavily when planning training schedules and topics.

Summary

The results of this descriptive study indicate that the faculty surveyed have similar educational backgrounds to community college faculty nationally; they have been hired for their content expertise, not as trained educators; and trial and error in the classroom and learning from colleagues were the two greatest methods of learning about both teaching and assessment techniques. Data gathered in relation to the research questions revealed that while faculty are using lecture, they are using other instructional methods as well to reach their students. Despite feeling that good teaching is not rewarded and there is limited time for faculty development, participants recognize that their learning and their implementation of new teaching strategies improves student learning and they plan to participate in professional development activities to enhance and expand their classroom teaching and learning techniques. This dedication demonstrates that faculty are concerned about the gap between teaching and learning and do want to improve student learning.

Chapter 5 provides an interpretation of the research findings, ties them to the initial research problem, and draws upon those findings to make recommendations for social change and further research. It is identified that measuring teaching effectiveness is complex, and community colleges as a whole are measured based on goals that are not necessarily the goals of students or individual colleges. Recommendations include not only new measures for teaching evaluation, but also for community college evaluation.

CHAPTER 5:

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

Introduction

This chapter interprets the findings presented in chapter 4. A summary is presented first to provide a review of the purpose, research problem, methodology, and research questions. An interpretation of the findings is presented second, including discussion as to how the results relate to the literature as well as the theoretical framework, self-efficacy. A discussion of recommendations for practice within the community college follows, including implications for social change and recommendations for action. The chapter concludes with recommendations for further research of topics that need closer examination.

Summary of the Study

The intent of this study was to investigate what community college faculty are doing in the classroom in comparison to what the literature says they should be doing in order to be effective at teaching for the diverse 21st century student population. This purpose resulted from competing views about the best method of instruction (Burgan, 2006), national concerns on teaching effectiveness and student learning (Banta, 2002; O'Banion, 1999), national movements for a shift from teaching to learning (Hanson, 2006; O'Banion, 1999), and national calls for accountability and college-level outcomes assessment (Alfred, Shults, & Seybert, 2007; Cohen & Brawer, 2003; Mellow & Heelan, 2008). Community colleges are being accused of having disconnected curricula,

nonengaging instructional approaches, and high student attrition (Erickson, Peters, & Strommer, 2006); and faculty are criticized for failing to educate and for using predominately lecture- and teacher-centered approaches to teaching (Conti, 2004; Long & Coldren, 2006). Limited data exist, however, on community college teaching practices and methods to motivate faculty to learn and implement new teaching methodologies when little training or support is provided (Hardy & Laanan, 2006; Isaac & Boyer, 2007).

This study specifically explored current teaching and assessment practices. Faculty-perceived impact on teaching and learning was investigated to better understand their teaching behaviors and assist in improving the teaching and learning process. The use of a survey employing mixed-method questioning facilitated the collection of data. These data identify what faculty are doing in the classroom as well as provide an understanding of why they teach as they do. Since these data are descriptive and exploratory, hypothesis testing was not required (Johnson & Christensen, 2004; Kempner, 1992). A descriptive understanding of faculty perceptions and perspectives was desired by the researcher to aid in determining how to improve the learning process for student success and persistence. The research questions guiding this study were:

1. What teaching methods are community college faculty using in the classroom across several campuses within a large community college system in the southwestern United States?
2. How does this faculty evaluate student learning and their teaching effectiveness?
3. How does this faculty learn about the latest teaching and assessment methods, and what motivates them to do so?

Through descriptive statistics and inductive analysis of closed and open-ended survey questions, the following information emerged. First, background information identified the disciplines in which responding faculty taught and their academic preparation. A balanced mix of faculty from all disciplines responded, and background educational levels are similar to those reported by community college faculty nationally according to the 2004 National Study of Postsecondary Faculty (Catildi, Bradburn, & Fahimi, 2005).

Second, responses to the research questions identify that, contrary to the literature reported in chapter 2, faculty are incorporating instructional methods other than just lecture in the classroom (Research Question 1). Faculty are using a variety of assessment methods for their students' performance as well as their own teaching effectiveness, and because they feel that college and district level assessment methods of their own performance are not necessarily adequate, they are incorporating assessment methods of their own (Research Question 2). Finally, despite feeling that good teaching is not rewarded, faculty indicated that they do find professional development training beneficial to their teaching and they are motivated to attend when relevant topics are offered at a time that does not conflict with their teaching schedule and other teaching obligations (Research Question #3).

Interpretation of Findings

Faculty Demographic Analysis

As indicated in chapter 4, a total of 185 full-time faculty participated in this study, of which 45% were male and 55% were female. According to statistics from the

MCCCD Human Resources Demographics (2008), the entire faculty population across all 10 campuses is composed of 46% male and 54% female faculty. Gender demographics of this study are within 1% of the entire MCCCD faculty population. The female population within MCCCD is slightly higher than that of national statistics, which indicate community colleges overall employee an approximately 51% male and 49% female faculty (Catildi, Bradburn, & Fahimi, 2005; Phillippe & Sullivan, 2005)

More than 27% of the study's respondents held doctoral degrees, 68% held master's degrees, and 12% of those with master's degrees are pursuing a higher level degree. National statistics indicate that degree distribution among community college faculty is 19% doctoral degree and 63% master's degree. The faculty from this study have a slightly higher but similar average of doctoral and master's degrees to that of community college faculty nationally according to the 2004 National Study of Postsecondary Faculty (Catildi, Bradburn, & Fahimi, 2005).

When asked about learning how to teach, participants identified that they learned about teaching and assessment through several sources, including formal degree course work, external course work related to teaching and learning, internal training workshops, previous teaching employment, colleagues, and trial and error in the classroom. Trial and error in the classroom and learning from colleagues were the two most frequently cited methods of learning about teaching and assessment, not formal degrees, formal training, or campus or district training. This is consistent with findings reported by Boettcher and Conrad (2004) as well as Weimer (2006), that postsecondary faculty generally get hired with a high level of competence in a content area and then learn about teaching and

learning through colleagues, trial and error, and observation. Weimer referred to this as learning from the "school of hard knocks" (Weimer, 2006, p. 170).

Research Question 1: What teaching methods are community college faculty using in the classroom within a large community college system in the southwestern United States?

The literature reviewed in chapter 2 indicated that university and K-12 faculty predominantly use traditional lecture methods to teach (Barrington, 2004; Colbeck, Cabrera, & Marine, 2002; Howell, 2002; Jones, Reichard, & Mokhtari, 2003), and Colbeck et al. (2002) stated that more than three-fourths of faculty are using lecture as their primary teaching method. Howell (2002) argued that lecture leads to student disinterest and attrition, which faculty interpret as a lack of student motivation.

Data presented in chapter 4 indicate that these MCCCD faculty are using lecture, but more than 95% use other instructional methods as well. Faculty are using diverse teaching strategies and they try to find out about their students' learning styles, backgrounds, and interests to accommodate those differences in their teaching. Respondents reported that they are combining lecture with at least three to four other teaching methodologies, including discussion, student presentations, group activities, labs, and hybrid or online classroom alternatives. This mix of strategies is appropriate, as there is not one teaching method, learning style, or magic formula that will guarantee learning for all students across all disciplines (Galbraith, 2004; Karns, 2006). Studies by Barrington (2004), Burke and Dunn (2003), Karns (2006), Young et al., (2003), and many others have established that an instructor can deliver an effective class by incorporating varying activities that span multiple learning styles and intelligences.

Faculty further identified that to engage students, they incorporate active discussion, questioning techniques, they follow through with positive feedback, and incorporate interactive group activities and team building exercises. Faculty described various active learning activities, exercises, labs, simulations, discovery activities, and games they incorporate to engage students. They also incorporate problem-solving exercises, problem-based learning, and encourage critical thinking. Faculty reported that when they do incorporate lecture, they use timely, relevant topics and utilize examples and demonstrations when appropriate. They also apply energy, enthusiasm, and humor. These techniques did vary based on the discipline in which the responding faculty taught. Faculty also commented that they create a trusting classroom environment, respect student opinions, and know their students' names and interests. Faculty are increasing the use of technology, both in the forms of online or hybrid course alternatives, and the use of i-clickers in the classroom to gain student engagement and participation in discussion, active quizzes, and to solicit their opinions.

The activities that faculty are incorporating to engage students are the ones that have been recommended by the experts to reach the diverse community college student across varying age, gender, race, and culture, as was identified in chapter 2. Faculty are incorporating strategies identified by learning style and multiple intelligence theories that suggest reaching various cognitive, sensory, and learning modalities (Denig, 2004; Gardner, 2004; Giles et al., 2006; Shearer, 2004). These strategies also model some of the activities of learner-centered education as described by Barr and Tagg (1995) and O'Banion (1997, 1999), although it was intended for learner-centered education to be

provided by more than just the faculty, it was intended that it be incorporated throughout the institution according to the ideals set by O'Banion (1997).

Research outlined in chapter 2 clearly identified that community college students and educational needs have changed in the 21st century, and data reported in chapter 4 indicate that the faculty have also changed their approach to teaching. Faculty indicated they lecture less to accommodate other methods of teaching, they are more apt to vary teaching styles, they incorporate more interactive and hands-on types of activities, and more technology. There are still faculty who continue to use traditional lecture, and these faculty identified they do so because teaching fads come and go but lecture remains reliable. Barr and Tagg (1995) alleged that the lecture format where faculty talk and students passively listen is contrary to almost every principle of optimal settings for student learning, but they did agree that lecture will not go away and is one of many possible instructional methods to promote learning. Many faculty pointed out that lecture does not have to be boring, and with active discussion and guided questioning intermingled, it can be effective and engaging.

By inquiring about not only what teaching techniques faculty use in the classroom but also how they engage their students and how they have changed their approach to teaching over time, insight is gained on teacher self-efficacy, the theoretical framework that grounds this study. Faculty do believe they can impact student learning, as indicated by data related to Research Question 2. According to self-efficacy theory, faculty beliefs in their ability to bring about student learning affect their willingness to reflect upon change or improve their instructional techniques (Bandura, 1986; Ross & Bruce, 2007). These faculty have demonstrated a willingness to utilize diverse strategies and to change

their approach to teaching, indicating that they have a higher level of self-efficacy and do want to challenge their students and see them succeed.

Research Question 2: How does this faculty evaluate student learning and their teaching effectiveness?

Following the advice of experts on learning style and student-centered learning theories suggests using a variety of methods to measure student learning (Denig, 2004; Giles, Ryan, Belliveau, DeFritas, and Casey, 2006; O'Banion, 1997, 1999). Faculty indicated that they are utilizing a variety of methods to assess student grades. They reported the use of participation, quizzes and exams, labs and clinics, oral presentations, research, group or team projects, service learning, portfolio development, and online activities. Interestingly, while student grades are what determine whether or not a student passes a course, graduates with a certificate or degree, and how society evaluates their intelligence level, the data indicate that only 40-58% of the faculty have had training in various testing and assessment techniques. More than 81% of the respondents used quizzes and exams to some degree for grade determination, yet relatively few responding faculty had training in writing or assessing quizzes and exams, and many said they would like more training in this area. Since faculty use assessment as their means for evaluating student success as well as their own teaching effectiveness, this observation should be taken into strong consideration by administrators and faculty developers. Appropriate measurement is critical for improvement in the teaching and learning process, and as pointed out by Weimer (2006), teaching has no purpose unless it can be connected to learning.

When questioned about the perceived effectiveness of college and district faculty evaluation methods of their own performance, more than half the faculty indicated they did not believe current administrative faculty methods accurately measure their teaching effectiveness or make them better at their job. The data indicated that more faculty perceived the college student evaluation form as a better tool to measure teaching effectiveness. This researcher was surprised by that data since the student evaluation forms are not specific to faculty teaching methods. More than 74% of responding faculty did agree that better ways to evaluate teaching performance are needed, with an additional 10% undecided, indicating they did not find current methods necessisarily effective, but are also not necessarily in favor of a change. National data from a 1997 study on community college faculty attitudes and trends (Huber, 1997) indicated that in 1997, 67-70% of faculty felt that when it came to teaching, better ways to evaluate performance were needed. These current data indicate that faculty perceptions on the measurement of teaching effectiveness have not improved over the past decade.

Faculty indicated that they use a variety of methods to evaluate their own teaching effectiveness. Three percent of the faculty misread the question on how they evaluate their effectiveness and instead rated their own effectiveness, such as “I think I am effective,” which is a subjective perception as opposed to an objective perception based on an evaluation of their effectiveness through concrete measures such as student performance, success, attendance, and retention. One faculty member commented “of course we think we are very effective.” If all faculty were that effective, there would not be a national debate or controversy surrounding the effectiveness of education. Fortunately, 97% of the faculty indicated that they monitor student grades and

performance, listen to student feedback and comments, review student evaluations, collect their own personal course assessment forms, observe the level of engagement and participation of students in their classes, utilize pre and post-assessments, survey student attendance and retention in their classes, review faculty evaluations and peer feedback, and reflect on what is happening in their classrooms to find ways to improve.

Self-efficacy theory affirms that instructors with higher self-efficacy will reflect on their instruction and set higher goals for themselves and their students (Bandura, 1986; Ross & Bruce, 2007; Tucker et al., 2005). The fact that more than 74% of these faculty believe better ways to evaluate their teaching effectiveness are needed and that more than 83% identified numerous ways in which they measure their own teaching effectiveness above and beyond what is required for administrative purposes indicates that these faculty have a high level of self-efficacy.

Ross and Bruce (2007) expounded upon self-efficacy to include a theory of teacher change. At the core of this theory is teacher self-assessment, in which teachers first observe their effect on student achievement, then make a judgment about how well they attained their instructional goals, and then reflect on how satisfied they are with their results. Self-assessment combined with knowledge of innovative instructional strategies heightens self-efficacy, which influences teacher goal setting and effort expenditure according to Ross and Bruce. According to Bandura (1997), the talents and self-efficacy of teachers are required to create conducive learning environments. These faculty are combining their existing talents and self-efficacy to promote teaching effectiveness and student learning.

Research Question 3: How does this faculty learn about the latest teaching and assessment methods, and what motivates them to do so?

The findings identified earlier are consistent with the literature that these faculty are predominantly hired for their content expertise and are not necessarily trained educators. Furthermore, only 65-79% of these faculty have had training on various classroom instructional methods, and only 40-65% have had training on course management and evaluation methods. More than 88% of those who have had training in classroom instruction, varied teaching methodologies, and student centered learning found these experiences helpful in their teaching, and more than 84% of those who had training in assessment of student learning, the development of critical thinking skills in students, and differences in learning among students found these experiences helpful.

Faculty provided a long list of professional development activities they would find helpful to facilitate improved teaching and student learning. They enumerated technology training (including time and support to implement the technology after the training is completed), writing tests and assessing their effectiveness, innovative approaches to teaching diverse students, student engagement, instructor-led "best-practices" workshops, professional workshops or conferences, discipline-specific educational training relevant to the classroom, critical thinking development and problem solving, and new techniques that have proven, positive impact on student performance. Unfortunately, when reviewing the individual college training and employee development schedules, there were very few of these types of courses offered. Most offerings were on the student information system, Blackboard (for grading), Memo (the district email system), and Microsoft Office Products (Center for Teaching and Learning,

2008; Employee and Organizational Learning, 2008; Training and Employee Development, 2008). The district office has additional software training and non-teaching related offerings, but only an occasional course offering related to teaching and learning (Employee and Organizational Development, 2008). Attending district trainings requires up to a 20-mile or greater drive each way for faculty from many of the individual colleges.

In the past, the district hired a professional speaker once a year to come out for all colleges and present a topic related to student success. This practice has recently been discontinued, and the individual colleges are promoting a day or week of learning prior to the start of the semester. Each of the three campuses had anywhere from one to a handful of sessions that relate to student engagement and teaching effectiveness techniques during this day or week, but many of these sessions lasted less than 2 hours and were presented in an informational format (Center for Teaching and Learning, 2008; Employee and Organizational Learning, 2008; Training and Employee Development, 2008).

This district supports 1,264 faculty, who in turn, are accountable to 346,363 students as of the fall semester of 2007 (Maricopa County Community Colleges, 2008b). The professional development offerings are limited, and conflict with the teaching schedule of most faculty. Each individual college has its own training department, each of which select topics that may or may not support teaching and learning. There is no published strategic training plan district-wide or among the individual colleges that clearly identifies how and why the colleges select the training that they do, or that demonstrates a goal to enhance teaching and learning. One of the three individual colleges studied offered an array of teaching and learning professional development

options during the spring 2009 first week of accountability, and a second offered a few teaching and learning opportunities during the fall semester of 2008. The third campus offered little in the way of teaching and learning, and even appears to have discontinued support for its faculty connection center based on the fact that its schedule has not been updated on the Web site since 2006. Again, many of the times that trainings faculty may be interested in are offered conflict with their teaching schedules, and are not offered repetitively so that faculty from different shifts can attend various times (Center for Teaching and Learning, 2008; Employee and Organizational Learning, 2008; Training and Employee Development, 2008). If individual community colleges and community college districts nationally show a similar lack of commitment to teaching and learning, which studies by Barrington (2004) conclude is true, there seems to be a disconnect between the purpose of teaching and learning and support for enhancing the teaching and learning process.

Many motivating factors and obstacles were identified about what would motivate faculty to learn about the latest teaching and assessment methods. Providing more free time and more convenient training times (followed through with support) was the largest motivator, and lack of time was the largest obstacle. Faculty identified that implementing a new technique takes a lot of time beyond just attending a training session. They stated that there should be support and recognition for implementing new technologies and teaching methods. Other motivators included some form of professional growth credit or recognition, especially for those that are at the ceiling for pay incentives; training on methods that were proven to work; training that would simplify the teaching process; and training on techniques that can be realistically applied in the classroom with useful

relevant topics. Many commented that they did not feel current training was delivered by professionals or that they did not gain anything of value for their time. Faculty indicated that additional obstacles included training times that conflict with their teaching schedules, off-site trainings were too far, the subject matter was not important to them, and they expressed a feeling that administration does not support training and improvement in the classroom.

Faculty perceived that good teaching is not rewarded and that they are limited on time for faculty development, yet they did recognize that their learning and implementing new teaching strategies improves student learning and they plan to participate in professional development activities to enhance and expand their classroom teaching and learning techniques. This dedication demonstrates that currently employed faculty are concerned about the gap between teaching and learning and do want to improve student learning. Respondent concerns about a lack of time to learn and implement new methods are not merely disgruntled complaints. National data confirm that implementing new techniques takes time and effort, and faculty already work hard and put in 50 hours or more per week, regardless of rank or type of academic institution (Catildi, Bradburn, & Fahimi, 2005; Erickson, Peters, & Strommer, 2006).

Despite occasional comments made by faculty about the amount of time they spend doing their job, how exhausted they are due to their teaching schedules, or the increased need for more remedial teaching, 97% indicated that if they had it all to do over again, they would choose a teaching career. Faculty overwhelmingly responded that they love teaching, have a passion for it, find it enjoyable and rewarding, that they want to make a difference in their students' lives, and they are excited and passionate about their

subject area. The internal rewards justify the effort, which is why many faculty do take the extra time and effort to learn and implement new teaching methodologies to improve student learning even though they feel that the institution does not provide adequate reward. Colbeck et al. (2002) had identified that faculty go into this career because they are intrinsically motivated, and this study upholds their findings.

Faculty clearly indicated that they want their students to succeed. The data in Chapter 4 demonstrated they are incorporating diverse teaching strategies and they are taking extra steps to measure their teaching effectiveness. Yet when it comes to training and professional development, too few faculty attend. The number one obstacle is time, which if trainings are offered when faculty are teaching, cannot be avoided. When time is used as an excuse, however, self-efficacy theory can enlighten why this is happening. Bandura (1997) stated that teachers' beliefs in their instructional efficacy affect how they structure academic activities. Many of the faculty commented that they are good at what they do, and rated themselves as above average or superior teachers. Since they do not feel that training is supported by administrators, but they do believe they are effective educators, it would make sense that more time is dedicated to teaching activities than to training activities when the instructors feel short on time. Blackburn (1991) asserted that faculty will give their time to activities they believe will result in favorable outcomes. By spending more time on self-reflection and modifying teaching strategies based on observation of what is happening in the classroom, faculty feel their time is spent where it is most effective.

When trying to evaluate how to motivate faculty to improve their teaching and increase student learning and persistence, one must understand that motivation requires

forethought, goal setting, and self-evaluation of one's own behavior according to Bandura (1997). Efficacy beliefs can raise and sustain motivation, but the skills to perform the desired task must exist as well, which is why training on diverse teaching strategies, student engagement activities, and assessment techniques is so important. Bandura stated that people may have the skills and a strong sense of efficacy to do a task well, however, and still choose not to do so. This usually occurs when there is no incentive to do so, or people lack the necessary resources to perform the activities adequately, such as equipment, time, institutional support, financial support, and so forth. With this in mind, administrators should not be so quick to think that faculty just don't want to do their job. As indicated by the responding faculty, it takes more than just a 2-hour training to learn and implement a new teaching method, and many times the support, equipment, and rewards are just not there to make it happen effectively.

The data collected from this study and self-efficacy theory enhance an understanding of the faculty perspective of teaching and learning. Faculty beliefs in their ability to teach influence the amount of effort they expend, how long they persist, how resilient they are to challenges, and how well they cope with stress (Leithwood & Beatty, 2008). Teachers with higher self-efficacy are reported to be less critical of students, to be more persistent in developing student achievement and interpersonal relationships in the classroom, to have better planning and organization for instruction, to be more willing to try a variety of approaches in the classroom, and to have higher levels of job satisfaction (Bandura, 1997; Leithwood & Beatty, 2008). The data captured by this study and reported in chapter 4 indicate that in general, faculty have a high level of self-efficacy and are expending great effort to promote student success.

Teaching Effectiveness

Measuring teaching effectiveness on learning is complex and requires multiple sources of information (Kyriakides, 2005; Levinson, 2005). This study only surveyed faculty on their own perceptions of teaching effectiveness and did not assess student evaluations, student grades, completion rates, or administrative evaluations of the responding faculty. According to national statistics reported earlier, the faculty in this study are similar to community college faculty nationally and the students they teach are similar nationally as well. The data indicated that these faculty do incorporate the instructional and assessment activities the literature reports is necessary for student learning and success. Responses identify that faculty are becoming more learner-centered and less teacher-centered as was also indicated is necessary by the literature. Faculty are reporting teaching methods that are congruent to what the literature states is needed to meet the needs of the diverse 21st century community college student. So if faculty have changed and are teaching as "prescribed," why do community colleges continue to experience recurring criticisms, waves of reform movements, and demands for instructional change?

Community colleges as a whole are predominantly measured based on student completion and transfer to 4-year universities, which is not necessarily the goal of the students or of many of the courses and programs offered at the community college (Cohen & Brawer, 2003; Levinson, 2005; Phillippe & Sullivan, 2005). Upon reviewing statistics reported by the district within which the faculty surveyed in this study teach, if one only looks at course completions or degree completions, it can be understood why critics demand change. In reviewing course completion over the past 10 years, the

percentage of students that started and completed their courses was consistently between 79.3% and 81.3%. In reviewing successful course completion over the past 10 years, based solely as a grade of A through C or passing, successful completions have remained consistently between 72% to 74% (Maricopa County Community Colleges, 2008b). On a standard grading scale that students are evaluated by, this would be equivalent to a low C.

To put these percentages into real numbers, an evaluation of district-wide data from the fall semester of 2007, 71.6%, or 248,158 students completed their courses with a passing grade. This means that 98,205 students did not complete their courses successfully according to national measurement standards. Of the 98,205 students that did not complete their courses successfully, 11,684 (3%) received a grade of D, 17,497 (5%) received a grade of F, 63,987 (18%) withdrew, and an additional 2,040 (0.6%) withdrew failing. Students who were auditing (104 or <.01%), were in non-credit classes established on a pass-fail system (1,861 or 0.5%), and that received an incomplete (1,032 or 0.3%) also account for students that are not counted as successful completions. An additional 151,062 (30%) students enrolled in classes, but withdrew during the first week of their classes. While in the fall semester of 2007 there were 346,363 course completions, a number that was fairly consistent for the past 4 years, there were only 17,368 degrees, transfer certificates, or occupational certificates awarded for 2007-2008 graduates district-wide (Maricopa County Community Colleges, 2008b). These numbers are for one county, within one state. If these percentages are similar across the nation, there is cause for concern and a need for more information than just numbers representing course grades and completions.

Determination of the success of community colleges requires not only looking at grades, course completions, and degrees and certificates awarded, but also at the millions of adults who take noncredit and workforce training courses, remedial courses, general interest courses, and skill building courses. Their reasons for attending are not degree attainment as standard assessment measures report, and these students still learn and achieve personal success (Cohen & Brawer, 2003; Mellow & Heelan, 2008; Phillippe & Sullivan, 2005). Mellow and Heelan pointed out that the increasing numbers of underprepared students severely strain the ability of community colleges to increase student success rates. Phillippe and Sullivan noted that these individuals most likely have an increased standard of living as a result of these classes and the community is likely to "benefit economically through consumer spending and increased tax revenues" (p. 63). Community college faculty transform students who are not considered "college material" by 4-year universities into engaged thinkers, scholars, and skilled workers (Mellow & Heelan, 2008; Phillippe & Sullivan, 2005). In light of these data, it is time to begin measuring community colleges and their faculty accordingly.

Implications for Social Change

Cohen and Brawer (2003) stated that, "In the areas of teaching and especially learning, the profession has made little progress in evaluating its efforts." (p. xi). There has been a rise and fall of teaching and educational theories, but there is no measurable difference among distinct methods of college instruction when evaluated by student performance. No one method of teaching has been shown as more successful than another (Cohen & Brawer, 2003). Yet faculty are challenged across the nation to

improve education, increase student retention and success, and prepare students for a rapidly changing world and competitive society.

Faculty must attempt to use various instructional and assessment techniques to facilitate learning and critical thinking across the diversity of age, gender, race, culture, and preparedness of community college students. Ayers and Ostrander (2005) stated that to be successful and competitive in industry, students must develop skills in problem-solving, communication, and must be able to work successfully in collaborative environments. Learner-centered and active learning strategies are a means by which community college faculty can effectively facilitate learning for all students and develop skills in problem-solving, communication, and collaboration.

The data gained from this study identified that many individual faculty are incorporating learner-centered and active learning techniques, but the data also identified that too few faculty have training on these techniques and that faculty perceive they are not rewarded for faculty development efforts or supported by administrators or the institution to implement new techniques. The perception of not being supported or rewarded is not unique to these faculty or new to faculty nationwide according to the data presented in chapter 2. Mellow and Heelan (2008) stated that community colleges as a whole do not reward teaching innovation, nor is there any penalty for using out-of-date methods.

By identifying classroom practices, faculty perceptions of their own teaching effectiveness, perspectives on evaluation methods, and recognizing motivational factors and obstacles to faculty participation on training and professional development, it is hoped that these current data will contribute to positive social change for students and

faculty by informing and encouraging administrative vision, support, and policies relating to faculty development and learner-centered programs to increase student engagement and success. Additionally, administrators must understand that faculty do not stand alone when it comes to responsibility for student success. Teaching and learning must be a part of the campus culture as recommended by Sperling (2003), and learner-centered philosophies and systems-thinking strategies should be applied college-wide and district-wide for larger community college systems to establish a holistic learner-centered approach, as recommended by O'Banion (1997, 1999) and Senge (1990). This data has applicability to community colleges nationwide. The faculty surveyed in this study and the students they teach are similar to faculty and students nationally, as evidenced by data from the National Profile of Community Colleges (Phillippe & Sullivan, 2005), the 2004 National Study of Postsecondary Faculty (Catildi et al., 2005), and discussed earlier in this chapter and in chapter 2.

Recommendations for Action

There are three recommendations for action based on the results of this study. First, due to constituent demands for increased learning and responses by faculty that new methods for evaluating teaching effectiveness are needed, new measures for teaching evaluation need to be developed and executed that contribute to faculty professional development. Self-reflection and self-evaluation should be a part of the evaluation process so that faculty become more aware of why they do things the way they do, what consistently fails and why, and what may lead to more productive approaches. To foster faculty acceptance, development of these measures should be shared between faculty,

faculty developers, and administration. Furthermore, new evaluation methods are needed to measure student success at community colleges as a whole, since success cannot be successfully measured by course grades and degree completion based on the diverse needs and goals of the diverse 21st century student. This approach to evaluation and measurement must become a concentrated, nationwide effort on the part of college administrators.

Second, professional development opportunities, facilitation methods, times offered, and support for activities and implementation need to be examined and revised by those responsible for planning and scheduling training activities, and faculty should be consulted. Training specific to teaching and learning should be offered, including activities that revolve around self-reflection to improve student learning, creative and effective student assessment, active learning and student engagement. These training sessions should model the technique, be presented by someone who has used them successfully, and allow time and support for implementation in the classroom. Faculty should be rewarded for implementing innovative techniques and improving student success, which can even be done by incorporating it into the evaluation process.

Finally, organizational change is required to implement and support a learner-centered institution. Colleges should take a holistic approach to implement a shared mental model and learner-centeredness approach as recommended by Senge (1990), O'Banion (1997, 1999), and Mellow and Heelan (2008). Faculty cannot, on their own, enhance the overall student success of large numbers of students with widely differing needs and characteristics. Every member of the college must support student success. Entirely new programs, policies, and paradigms must be established that recognize

student diversity and provide an effective learning system that supports the needs of students both inside the classroom and within the community college system as a whole to help them succeed and persist.

Recommendations for Further Study

Teaching that leads to successful learning is critical to society, which needs socially responsible, informed, intelligent members with workforce skills and the ability to communicate, problem-solve, and work collaboratively. Community colleges need to develop a means to demonstrate student success to continue to receive support from constituents and outside funding sources. This support is critical to the survival of community colleges, especially in these times of local and national economic hardship.

This study brings forward four areas that suggest further study. First, community college faculty should be surveyed at the national level, beyond just their demographics and job satisfaction. A national survey conducted by a nationally recognized body should ask actual teaching practices, assessment methods of both students and faculty, perceptions on teaching effectiveness, and attitudes towards faculty development and indicate by the results how these elements enhance the teaching and learning process. This information would provide data, not speculation, that indicate whether faculty do or do not predominantly use lecture and whether or not teaching methods are effective for student learning at the community college level. Developing assumptions based on data obtained from primary and secondary teachers or university faculty does not enable educational leaders and policy makers to make accurate decisions that impact community college support and funding. Second, new methods for evaluating community college

effectiveness as a whole are needed to account for the actual goals of the students that attend community colleges, which do not necessarily include completing a 2-year degree and transferring to a 4-year university. These methods could be designed by a national task force and then community colleges could be measured and assessed based on criteria more applicable to the education and services they provide their students and society.

Third, since it appears that there is a disconnect between faculty development opportunities and faculty participation in them, both supported by the data captured in this study and research presented in chapter 2, further research should be conducted on faculty development programs, especially ones considered successful at other community colleges. Finally, a national study should be conducted across administrators, faculty developers, and faculty on faculty development so that perspectives can be compared and contrasted to understand and overcome the disconnect between support for teaching and learning so that colleges can come to a mutual understanding and develop successful faculty development programs. While there is a cost to faculty development, it serves to improve teaching and learning, which is the ultimate purpose of the community college.

Reflection on the Researcher's Experience

This study was not premised on notions of remediation or deficiency among community colleges or community college faculty. It grew out of my own concerns from the criticisms of community colleges and a lack of funding and support for community colleges nationwide. Personal observation of my own teaching methods and that of my colleagues indicated that some of the literature on teaching and learning is accurate, yet there were not substantial data to support literature that stated that the majority of faculty

only use lecture and that faculty and community colleges are ineffective. Judging community college faculty based on data from university faculty and K-12 instructors does not yield accurate conclusions of community college faculty. It is time for community college research that focuses on community college faculty and how community colleges as a whole contribute to students and their success.

Due to the nature of an anonymous survey study, I was not able to influence the participants' responses. Based on the detail and in-depth responses I received, I do believe faculty answered honestly and accurately. At the onset of this study, I had the idea that many faculty did predominantly rely on lecture, and did not have the same passion that I have towards constantly improving teaching and learning and developing student success. As I was compiling and analyzing faculty responses, I discovered that while there were differences in the way each faculty member teaches, each has a passion for their learners and devotion to their success. I now have a better understanding for my colleagues' perspectives and passion for teaching and learning, and even though they are not aware of it since we did not interact, I have a stronger sense of collegiality with my colleagues. Teaching can isolate faculty from their colleagues, and this study gave me a chance to feel less isolated. I now know that many of my colleagues share the same passion and drive I have for student success.

Conclusion

The overall goal of this study was to identify what methods community college faculty use in the classroom, understand their perspective of teaching effectiveness, distinguish what faculty development activities are important to them, and discover what

motivates them to participate in professional development activities. This study provided data that indicate that faculty are incorporating the strategies recommended by the literature to engage students and increase student success.

Limitations exist in that faculty are not the only component in the teaching and learning process, and they are not rewarded or supported in their efforts to change the process to improve learning. Kuh, Kinzie, Schuh, and Whitt (2005) asserted that faculty cannot, on their own, enhance the overall student success of large numbers of students with widely differing needs and characteristics. Instead, "the dedication and efforts of everyone on campus are needed" (p. 171). Entirely new programs, policies, and paradigms must be established that recognize student diversity and provide an effective learning system that supports the needs of students both inside the classroom and within the community college system as a whole to help them succeed and persist.

This study began as the nation was starting to decline from an economic boom, but had not yet realized a severe downfall. As I conclude this study, the state of Arizona and the nation as a whole are in economic crisis. Within Arizona and the Maricopa County Community Colleges system, the end of 2008 and beginning of 2009 has initiated pay freezes, hiring freezes, and discussion for increasing hours, cutting pay, and eliminating resources. Faculty professional growth and travel funds for conferences have already been eliminated. While legislators have not yet indicated how much state funding will be cut, severe administrative actions are being implemented, additional cutbacks are taking effect every day, and the divide between faculty and administration is greater than ever.

It is at this time of national crisis that society needs the community colleges and their faculty the most. Millions of people have been displaced from their jobs and need continued education and updated workforce skills. It has always been and will continue to be the community college that provides these services and opportunities for these individuals. State and national funding should not be cut at the community college level. Furthermore, each individual community college and community college district must take this time to come together, reorganize to develop a systemic approach to improving teaching and learning, and cut only those services that are ineffective and out-dated. This is the time to revamp faculty development programs that are ineffective to offer the support and training that faculty need to help their students to rise from and overcome this recession. Continuing to operate training programs as they stand now is irresponsible since attendance is low and not related to teaching and learning. But to eliminate them all together is irresponsible as well. No other profession allows individuals to practice for years without expanding or updating their knowledge and skills (Weimer, 2006). This practice cannot continue with faculty whom the nation holds as responsible for educating society and helping individuals, and thus the nation, to succeed.

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APPENDIX A: FACULTY SURVEY ON TEACHING AND LEARNING

1. In which subject area do you mainly teach? (e.g.: math, biology) _____
   Is this subject:
   a. academic
   b. vocational

2. How many years have you taught at your present college/institution?_____

3. How many years have you taught overall? _____

4. What is your current level of academic achievement?
   a. Associate's degree
   b. Bachelor's degree
   c. Master's degree
   d. Doctoral degree
   e. Professional degree (M.D., D.O., J.D., etc.)
   f. Do not hold a degree
   g. Other _____please specify

5. Are you currently pursuing a higher level degree?
   a. Yes
   b. No

6. If responding "Yes" to the above question, why are you pursuing this academic degree? (circle all that apply)
   a. To increase salary
   b. For professional development in current teaching field
   c. For professional development in teaching
   d. To teach in a different academic field
   e. To leave education
   f. Other (please specify)
   _____

7. Where did you learn about teaching techniques? (circle all that apply)
   a. Through my formal degree
   b. Through a formal educational course, seminar, or workshop not sponsored by MCCCD
   c. Through my college, district, or MCLI training sessions
   d. Through previous teaching employment
   e. By trial and error in the classroom
   f. From colleagues
   g. Other (please specify)
   _____

8. Where did you learn about testing and assessment techniques? (circle all that apply)
    a. Through my formal degree
    b. Through a formal educational course, seminar, or workshop not sponsored by MCCCD
    c. Through my college, district, or MCLI training sessions
    d. Through previous teaching employment
    e. By trial and error in the classroom
    f. From colleagues
    g. Other (please specify) _____

Instructional Techniques Used in Classes

9. Thinking of your typical classes, what percentage of time do you spend on each of the techniques listed below? Place a checkmark in the column that best applies for each technique.

	Never	1-25%	26-50%	51-75%	76%-100%
A) Lecture	_____	_____	_____	_____	_____
B) Discussion	_____	_____	_____	_____	_____
C) Student press	_____	_____	_____	_____	_____
D) Group Activities	_____	_____	_____	_____	_____
E) Lab Teaching	_____	_____	_____	_____	_____
F) Videos/DVDs	_____	_____	_____	_____	_____
G) Hybrid/Online	_____	_____	_____	_____	_____
H) Other (specify)	_____	_____	_____	_____	_____

10. For the following, indicate whether you incorporate the teaching strategies Always, Often, Occasionally, Rarely, or Never by circling the most appropriate response.

	1 Occasionally	2	3 Rarely	4 Never	5 Always Often
I use lecture as the best method for presenting my subject material to students	1	2	3	4	5
I use diverse teaching strategies to address a broad spectrum of students	1	2	3	4	5
I allow students to participate in making decisions about the topics that will be covered in class	1	2	3	4	5
I use one basic teaching method because I have found that most effective for student learning	1	2	3	4	5
I use different techniques depending on the students being taught	1	2	3	4	5
I encourage dialog among my students in the classroom	1	2	3	4	5
I accept errors as a natural part of the learning process	1	2	3	4	5
I try to find out about my students learning styles, interests, or backgrounds and incorporate that into my teaching	1	2	3	4	5
I revise my courses	1	2	3	4	5

11. How do you engage your students in the classroom?_____
_____
_____
_____
_____
_____
_____

12. How have you changed your approach to teaching over time? _____
_____
_____
_____
_____
_____
_____
_____

13. On average, what percentage of your course grade do you determine based on each of the techniques below? Place a checkmark in the column that best applies for each assessment format.

	Never	1-10%	11-25%	26-50%	51-75%	76%-100%
A) Attendance/Participation						
B) Quizzes						
C) Exams						
D) Lab/Clinic/Shop/Studio						
E) Oral Presentations						
F) Research Assignments						
G) Group/Team Projects						
H) Service learning/Co-op						
I) Portfolios						
J) Other (please specify)						

Assessment

14. Regarding your own assessment, to what extent do you Agree or Disagree that:

	1 Strongly Disagree	2 Disagree	3	4 Agree	5 Strongly Agree	Undecided
Current administrative faculty evaluation methods accurately measure my teaching effectiveness	1	2	3	4	5	
Current administrative faculty evaluation methods provide feedback that is helpful for me to improve my teaching	1	2	3	4	5	
The FEP process is beneficial to me and makes me better at my job	1	2	3	4	5	
The college's student evaluation forms provide me with effective feedback to know how I am doing	1	2	3	4	5	
We need better ways to evaluate teaching performance	1	2	3	4	5	
Student opinions should be used in evaluating the teaching effectiveness of faculty	1	2	3	4	5	

15. Please respond to the following general assessment questions regarding teaching.

	1 Poor	2 Acceptable	3 Average	4 Above Avg.	5 Superior
How would you rate your teaching?	1	2	3	4	5
How would you rate the teaching of the majority of faculty in your department?	1	2	3	4	5
How do you think students would rate the teaching of the majority of faculty in your department?	1	2	3	4	5
How do you think students would rate your teaching?	1	2	3	4	5

16. How do you evaluate your own teaching effectiveness? _____

_____

_____

_____

_____

_____

_____

Faculty Development

17. What types of teacher training have you had? In column A, indicate whether or not you have had training in the teaching methods listed. If you answer yes in column A, then circle in column B the number that best represents the degree in which you found the training helpful in your teaching.

	A. Have you ever had training in the following?	B. I found it helpful in my teaching. 1 Strongly Disagree 2 Disagree 3 Undecided 4 Agree 5 Strongly Agree
Classroom instruction (how to prepare a lecture, lead discussion, use collaborative learning, etc.)	Yes No	1 2 3 4 5
Varied teaching methodologies	Yes No	1 2 3 4 5
Student-centered learning	Yes No	1 2 3 4 5
Assessment of student learning	Yes No	1 2 3 4 5
Educational theory	Yes No	1 2 3 4 5
How to develop critical thinking skills in students	Yes No	1 2 3 4 5
Differences in learning among students	Yes No	1 2 3 4 5

18. What type of training have you had on course management? In column A, indicate whether or not you have had teacher training in the classroom management techniques listed. If you answer yes in column A, then circle in column B the number that best represents the degree in which you found the training helpful in your teaching.

	A. Have you ever had training in the following?	B. I found it helpful in my teaching. 1 Strongly Disagree 2 Disagree 3 Undecided 4 Agree 5 Strongly Agree
Writing a course syllabus	Yes No	1 2 3 4 5
Creating course materials	Yes No	1 2 3 4 5
Writing tests	Yes No	1 2 3 4 5
Assessing test effectiveness	Yes No	1 2 3 4 5
Evaluating student performance	Yes No	1 2 3 4 5
Using instructional resources (audio visual equipment, computer, etc.)	Yes No	1 2 3 4 5
Using computers for Online/Hybrid courses	Yes No	1 2 3 4 5

19. What teacher training or professional development would be helpful for you to facilitate improved student learning? _____

_____
_____
_____
_____
_____
_____

20. What would motivate you to participate in professional development activities to learn new methods to improve student learning? _____

_____
_____
_____
_____
_____
_____
_____

21. To what extent do you Agree or Disagree with the following:

	1 Strongly Disagree	2 Disagree	3	4 Agree	5 Strongly Agree	Undecided
Good teaching is rewarded by my college/institution	1	2	3	4	5	
Efforts to try new things in the classroom are rewarded	1	2	3	4	5	
Participation in campus training activities are beneficial to me	1	2	3	4	5	
Adequate mentoring and other support is available for newer instructors	1	2	3	4	5	
I can positively affect student learning	1	2	3	4	5	
My learning and implementing new teaching strategies improves student learning	1	2	3	4	5	
My teaching style does not impact student learning. Those that are capable of learning will learn no matter what	1	2	3	4	5	
College faculty development opportunities are generally a waste of time	1	2	3	4	5	
New teaching strategies/methodologies are generally fads and not worth my time to learn and implement	1	2	3	4	5	

22. Related to faculty development, in the next two years I plan to: (Check all that apply)
_____ Enhance/expand my classroom teaching and learning techniques
_____ Learn how to develop/teach online or hybrid courses
_____ Learn a new technology for use in the classroom or to aid my teaching and learning
_____ Increase my knowledge in student learning styles to increase student learning
_____ Attend more campus workshops on teaching and learning
_____ Travel to a professional conference on teaching and learning
_____ No changes are planned for the next two years
_____ Other (please specify): _____

23. What obstacles keep you from attending college driven faculty development opportunities: _____
_____
_____
_____
_____
_____

24. Why do you teach? _____
_____
_____
_____
_____
_____

25. If you had it to do all over again, would you choose a faculty/teaching career?
    a. Yes
    b. No

26. In how many years do you plan to retire? _____

Thank you for taking the time to complete this questionnaire. Please use the enclosed postage paid envelope to return it to the researcher, Susan Campbell.

APPENDIX B: PANEL OF EXPERTS

Matt Ashcraft
Director of Research, Planning, and Development
Glendale Community College, Mesa Community College
Master's degree in Counseling, Bachelor of Arts degree in Psychology
More than 10 years experience in research design and implementation

Amber Daines
Coordinator of Institutional Effectiveness
Glendale Community College
Bachelor of Science degree in Mathematics
More than 9 years of experience in research, data collection, and analysis

Dr. Sue Oliver
Faculty, Psychology Department
Glendale Community College
More than 15 years experience in research design and implementation as well as teaching

APPENDIX C: STUDY INVITATION LETTER

Dear Colleague,

I am currently conducting research for my doctoral dissertation in Education at Walden University. I am interested in knowing about your teaching methods and techniques in the classroom and perception of the effectiveness on student learning. Student learning and teaching effectiveness are of increasing concerns for the community college, yet there is a lack of research on community college faculty, classroom practices, and factors that influence teaching styles and methods. Most literature to date is based on the student or administrative perspective. Your input can provide a faculty voice to contribute to current research on the teaching and learning process, which may influence future administrative or accreditation decisions impacting community colleges and their faculty. It can also provide a baseline of measures important to faculty for future faculty development opportunities and assessment measures.

You will be receiving an anonymous survey in a couple of days that will take approximately 15-20 minutes to complete. Questions are related to your teaching techniques, assessment practices, and opinions on assessment tools and faculty development opportunities. The survey is completely voluntary and anonymous. No identifying information is requested. A pre-addressed, postage-paid envelope will be provided for you to return the survey to me, the researcher, at an off-campus address in complete confidentiality. I am requesting that the surveys be completed and mailed back over the next three weeks. I will need to have received all surveys by _____ (date depends upon when IRB approval is received), 2008.

If you have any questions, I am happy to answer them. You can contact me at 623-845-3164, or susan.campbell@gcmail.maricopa.edu. Additional contact information is provided on the consent form attached to the front of the survey.

I thank you in advance for your participation and input for this dissertation study. Your participation and time is greatly appreciated!

Warm regards,

Susan Campbell
Faculty for CAD Technology and Interior Design
Glendale Community College

APPENDIX D: COVER LETTER AND CONSENT FORM

You are invited to take part in a dissertation research study of teaching techniques at _____ Community College. You were chosen for the study because you are a full-time residential faculty member actively teaching during the fall 2008 academic semester. Please read this form and ask any questions you have before agreeing to be part of the study.

This study is being conducted by a researcher named Susan Campbell, a doctoral student at Walden University. Susan Campbell is also a faculty member from the CAD Technology and Interior Design programs at Glendale Community College.

Background Information:
The purpose of this dissertation study is to explore teaching techniques and faculty perceptions on student learning and teaching effectiveness at the community college. Most literature to date is based on the student or researcher perception, and is typically based on university faculty.

Procedures:
If you agree to be in this study, you will be asked to take approximately 15-20 minutes to complete an anonymous survey on teaching techniques, course assessment, and professional development.

Voluntary Nature of the Study:
Your participation in this study is voluntary and anonymous. Your decision of whether or not you want to be in the study will be respected, and no one within the Maricopa County Community College District will treat you differently if you decide not to be in the study. If you begin the survey, you may stop at any time. Additionally, you may skip any questions that you feel are too personal. Since the survey is anonymous, completing and returning the survey will indicate consent. You may keep this consent form.

Risks and Benefits of Being in the Study:
Risks: There is a possibility that you may perceive coercion to participate because the researcher is a faculty member. All data collected will be anonymous and produce no known risk. Benefits: You may benefit by seeing how Maricopa County Community College faculty compare to what researchers state is needed for community college students of the 21st century to learn and succeed in college.

Compensation:
There is no compensation for participating in this pilot study.

Confidentiality:
Any information you provide will be anonymous. The researcher will not use your information for any purposes outside of this research project.

Contacts and Questions:
The researcher's name is Susan Campbell. The researcher's faculty advisor is Dr. Ken Kempner. If you have any questions regarding this study, you may contact the researcher at 623.845.3164 or susan.campbell@gcmail.maricopa.edu or the advisor at 541.552.0100 or

kkempner@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Dr. Leilani Endicott. She is the Director of the Research Center at Walden University. Her phone number is 1-800-925-3368, extension 1210. You may also contact the MCCCD IRB office at 480-731-8128.

Thank you in advance for your time and participation.
Susan Campbell

APPENDIX E: FOLLOW-UP REMINDER LETTER

Dear Colleague,

Recently, you received a survey about current teaching methods and techniques in the community college as part of a dissertation study I am conducting for my doctoral degree at Walden University. Student learning and teaching effectiveness are of increasing concerns for the community college, yet there is a lack of research on community college faculty, classroom practices, and factors that influence teaching styles and methods. Most literature to date is based on the student or administrative perspective. It is important to gain a faculty voice to contribute to what is known about the teaching and learning process, which may influence future administrative or accreditation decisions impacting community colleges and their faculty.

If you have already completed and returned the survey, your participation is greatly appreciated. If you have not yet completed the survey, this is a friendly reminder to complete the survey and return it by _____, 2008, in the self-addressed, postage-paid envelope that was included with the survey.

While your participation is voluntary, your opinion is highly encouraged and valued. If by some chance you need another copy of the survey, please call Susan Campbell at 623-845-3164 or send an email message to susan.campbell@gcmail.maricopa.edu and another survey will be promptly sent to you. All information collected is anonymous, so your confidentiality will be maintained.

Thank you for your participation and input for this dissertation study.

Warm regards,

Susan Campbell
Walden University doctoral student
GCC Faculty – CAD Technology
623-845-3164

APPENDIX F: IRB APPROVAL LETTER

Dear Ms. Campbell,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "Current Teaching Methods in the Community College Dissertation Study."

Your approval # is 09-23-08-0308395. You will need to reference this number in the appendix of your dissertation and in any future funding or publication submissions.

Your IRB approval expires on September 22, 2009. One month before this expiration date, you will be sent a Continuing Review Form, which must be submitted if you wish to collect data beyond the approval expiration date.

Your IRB approval is contingent upon your adherence to the exact procedures described in the final version of the IRB application materials that have been submitted as of this date. If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive an IRB approval status update within 1 week of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB application, you a made commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained at the IRB section of the Walden web site or by emailing irb@waldenu.edu:
http://inside.waldenu.edu/c/Student_Faculty/StudentFaculty_4274.htm

Researchers are expected to keep detailed records of their research activities (i.e., participant log sheets, completed consent forms, etc.) for the same period of time they retain the original data. If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

Please note that this letter indicates that the IRB has approved your research. You may not begin the research phase of your dissertation, however, until you have received the **Notification of Approval to Conduct Research** (which indicates that your committee and Program Chair have also approved your research proposal). Once you have received this notification by email, you may begin your data collection.

Sincerely,
Jenny Sherer, M.Ed.
Operations Manger
Office of Research Integrity and Compliance
Email: irb@waldenu.edu

Fax: 626-605-0472

Toll free : 800-925-3368 ext. 2396
Office address for Walden University:
155 5th Avenue South, Suite 200
Minneapolis, MN 55401

Information about the Walden University Institutional Review Board, including instructions for application, may be found at this link: http://inside.waldenu.edu/c/Student_Faculty/StudentFaculty_4274.htm

CURRICULUM VITAE

Susan J. Campbell

EDUCATION

Feb. 2009	Ph.D., Education, Walden University (Doctoral Dissertation: *A Survey of Community College Faculty, Their Teaching Methodologies, and Congruence with Student Learning Needs)*
May 1999	M.B.A., Arizona State University
May 1988	B.S., Northern Arizona University (Major: Interior Design, Minor: Computer Aided Design)

WORK EXPERIENCE

2003-Present	Occupational Program Director, CAD Technology and Interior Design, Glendale Community College (GCC)
2004- Present	Residential Faculty, CAD Technology and Interior Design, GCC
2002-2004	Faculty, CAD Technology and Interior Design, GCC
2003-Present	CAD and Interior Design Instructional Council Committees, GCC
2006-Present	Faculty Senate Senator, GCC
2007-Present	President's Climate Survey Committee, GCC
2007-2008	President's Technology Advisory Committee, GCC
2000-2002	Director of Student Services and Graduate Placement, High Tech Institute
1999-2000	Instructor, University of Advancing Computer Technology
1993-2000	Instructor, Oasis Divers
1989-1995	Department Chair/Instructor, University of Advancing Computer Technology
1991-1992	Career Services, University of Advancing Computer Technology
1989-1991	Enrollment, University of Advancing Computer Technology

COURSES TAUGHT

2002-Present	Introduction to CAD Technology
2002-Present	Introduction to CAD for Interior Design
2002-Present	Residential Architectural Design Using CAD Technology
2002-Present	Commercial Architectural Design Using CAD Technology
2003-2006	Introduction to Interior Design
2003-2005	Architectural Drafting
2006	History of Architecture and Interior Design
1999-2000	AutoCAD

1999-2000	HTML and Web Design
2002-2005	3D AutoCAD
1989-2005	Introduction to AutoCAD
1989-2005	Introduction to Drafting
1989-2005	Student Success Skills
1989-2005	Introduction to Design Concepts

PRESENTATIONS

1998	Guest Lecturer at Arizona State University, West, for an undergraduate business class, *Introduction to Business Management*, on the topic "small business management."

BOOKS REVIEWED

2006	*Residential Design, Drafting, and Detailing* by Jefferis and Jefferis (2008). Thompson-Delmar publishing.
2005	*Architectural Drafting Assignments Using AutoCAD* by Brower (2006). Thompson-Delmar publishing.
2004	*Drafting and Design for Architecture* by Hepler, Wallach, and Hepler (2005). McGraw Hill publishing.
1999	*NAUI Scuba Diver* by Carroll (2000). NAUI publishing.