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CALLED TO TEACH: A MIXED METHODS EXPLORATION OF COMMUNITY COLLEGE ADJUNCT FACULTY'S TEACHING SELF-EFFICACY

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CALLED TO TEACH: A MIXED METHODS EXPLORATION OF COMMUNITY COLLEGE ADJUNCT FACULTY'S TEACHING SELF-EFFICACY

A dissertation submitted in partial fulfillment of the requirements for the
Doctor of Philosophy in Education, Educational Psychology
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by

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Abstract

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Adjunct faculty teach over 50% of courses in U.S. higher education but little is known about them as educators. Strong evidence has been found in the K-12 literature demonstrating the link between teachers' beliefs, instructional practices, and subsequent student outcomes. Teaching self-efficacy, beliefs in one's capabilities to perform specific tasks in a particular context, is an important contributor to motivation and performance (Tschannen-Moran et al., 1998). This research advances teaching and learning literature in higher education and provides insight into an understudied population of educators by exploring adjunct faculty's teaching self-efficacy and factors that influence those beliefs. In this mixed methods study, an explanatory sequential design was used to explore teaching-self efficacy among adjunct faculty at a Mid-Atlantic community college. Adjunct faculty were surveyed using the College Teaching Self-Efficacy Scale (Prieto Navarro, 2006). Data were selected from the surveys for further explanation in

subsequent interviews. Quantitative and qualitative data were merged to form an overall interpretation of teaching self-efficacy and factors that influenced those beliefs. Teaching self-efficacy was highest in creating a positive learning environment, followed by overall teaching self-efficacy, and then instructional skills. Assessing student learning was rated lowest. Adjunct faculty with fewer than five years teaching experience had lower self-efficacy scores than those teaching for six or more years. Mastery experiences and feedback from students and full-time faculty mentors emerged as the most influential sources of teaching self-efficacy. Student evaluations and attending Convocation were positively correlated with scores in overall teaching self-efficacy, instructional skills, and creating a positive learning environment. Adjunct faculty identified working to accommodate the needs of a diverse range of learners as the most significant challenge to teaching self-efficacy followed by challenges related to working conditions including inadequate pay and job insecurity. Key recommendations for promoting adjunct faculty's teaching self-efficacy beliefs include increasing opportunities for interaction with departmental colleagues to share best practices and teaching resources, and offering trainings at flexible times and in creative formats on instructional skills, assessment practices, and learning theories. Improving onboarding processes, recognizing different needs of adjunct faculty based on experience, and reassessing pay and employment structures are also needed.

Chapter One: Introduction

Teaching in higher education is garnering much needed attention. Though Shulman (1993) described the "pedagogical solitude" that often characterizes the field, and scholars such as Kezar and Maxey (2014b) have worked to energize research efforts in this area, the teaching beliefs and pedagogical skills training of college faculty are often overlooked when studying factors that contribute to college student success. Research has demonstrated the relationship between faculty participation in professional development focusing on pedagogical skills and improved student academic performance (Rutz, Condon, Iverson, Manduca, & Willet, 2012). Prior training in instructional skills is not required to teach in higher education and many faculty educators have never had formal education in delivering effective instruction, creating a positive learning environment, or assessing student learning. This is especially true for those called to teach part-time. Adjunct faculty, defined as part-time instructors hired on a contingent basis, enter teaching with a broad range of experiences and motivations. They play a critical role in higher education, delivering over 50% of instruction for U.S. undergraduates, yet are understudied in comparison to both full-time tenured faculty and graduate teaching assistants (AAUP, 2017; DeChenne, Enochs, & Needham, 2012). The current research, based in a large Mid-Atlantic community college, advances an understanding of adjunct faculty's self-efficacy beliefs about the role they were hired to fulfill: teachers. This was achieved by exploring how adjunct faculty perceive their teaching self-efficacy beliefs, defined as an individual's perceptions of his or her capabilities to successfully perform specified teaching tasks in a particular context and identifying personal and contextual factors that influence those beliefs.

Statement of the Problem

Research documenting adjunct faculty's dissatisfaction with working conditions conveys consistent themes about inadequate pay and lack of support (e.g. Kezar, 2013). Literature focusing on adjunct faculty as educators is more convoluted. Although studies have linked negative student outcomes to increased exposure to part-time faculty, specifics about their teaching are relatively unexplored (Jacoby, 2006). Additionally, few studies explore adjunct faculty's perceptions of their competence as instructors and the personal and contextual factors that influence these perceptions. Research shows adjunct faculty recognize professional development needs and express the desire for support in developing teaching skills (e.g. Dolan, Hall, Karlsson, & Martinak, 2013). However, these opportunities are few. Lack of training in pedagogical skills and institutional practices that fail to adequately prepare adjunct faculty to teach may impact their teaching self-efficacy and their instruction.

A well-researched approach to understanding instructional decisions and behaviors in the K-12 teacher motivation literature centers on teachers' beliefs. Fives and Buehl (2012) proposed teacher beliefs serve as filters for interpretation, frames for defining problems, and guides for action. Tschannen-Moran, Wolfolk Hoy, and Hoy (1998) highlighted the relationship between teaching self-efficacy beliefs; i.e., perceptions of competence for specific teaching tasks in a particular setting and instructional behaviors. They asserted teachers with higher efficacy beliefs persevere through challenges, are more willing to use a variety of instructional techniques, and are more confident in helping struggling students.

Literature exploring the teaching self-efficacy beliefs of college faculty is limited compared to K-12 teachers. Prieto Navarro (2005) offered a significant contribution in this area discovering that use of instructional skills was influenced by efficacy beliefs among college faculty. Chang, Lin, and Song (2006) measured teaching self-efficacy beliefs among full-time

faculty in Taiwan finding beliefs differed by gender, discipline, and experience. Fives and Looney's (2009) findings were similar among faculty at a U.S. research institution. In their exploration of the teaching self-efficacy beliefs of graduate teaching assistants, DeChenne, Enochs, and Needham (2012) found that efficacy beliefs in the area of instructional skills was positively correlated with teaching experience and professional development improved teaching self-efficacy. Studies of adjunct faculty's teaching self-efficacy are harder to find. As a notable exception, using a phenomenological approach to explore adjunct faculty's motivations, Christensen (2012) identified doubts about teaching self-efficacy related to lack of teaching-related supports as an emergent theme. The current study represents significant progress in extending the conceptual framework of teaching self-efficacy in the higher education teaching context.

Overview of the Study

This study adds clarity to an understanding of adjunct faculty as educators by directly exploring their teaching self-efficacy. The current study focused on adjunct faculty at a single institution, allowing for in-depth exploration of their beliefs and experiences within a bounded unit. An explanatory sequential mixed methods research design was used (Creswell & Plano Clark, 2011). Quantitative data was collected via a survey administered to all adjunct instructors at a large community college in a Mid-Atlantic state, pseudonym, Mid-Atlantic Community College (MACC). Data was selected from the surveys for further explanation via interviews with a diverse sample of adjunct faculty with various levels of experience and representing a range of academic divisions. This institution provided multiple examples of institutional efforts to integrate and support adjunct faculty. MACC offers several teaching support services in addition to traditional student evaluations of teaching (SETs) including an annual adjunct convocation, formal mentoring relationships with more experienced faculty, a comprehensive

adjunct faculty evaluation process, and trainings/workshops. Basing the current study here provided a unique opportunity to explore the relationship between institutional factors and teaching self-efficacy beliefs. This study explored the contextual supports and challenges from the point of view of adjunct faculty with a specific focus on how these policies and procedures influenced their efficacy as educators. In-depth insights about devising strategies to support adjunct faculty's teaching emerged from this research.

Community College Educational Context

Day after day in U.S. community colleges, adjunct faculty go to work to educate a diverse group of students with unique and sometimes challenging educational needs. Motivations for teaching and experiences that led them to teach part-time are diverse but research consistently shows in general, they are highly educated, have valuable experience, and love teaching (Allison, Lynn, & Hoverman, 2014). It is important to provide adjunct faculty with the training and support necessary to be able to deliver effective instruction to the students they teach.

Although the valuable place community colleges hold in the U.S. higher education landscape is clear, issues related to institutional effectiveness plague the system. Student graduation rates are low. Of first-time college students who enroll in a community college, 38.1% earned a credential from a two- or four-year institution within six years (CCRC, 2017). Lack of community college student persistence has been identified as a significant problem (e.g. Juszkiewicz, 2016). The negative economic impact of such a high number of non-degree completing students extends well beyond the student, representing a loss of potential earnings and contributions to larger society by closing doors of opportunity open only to those with a postsecondary education.

Rankin, Katnsinas, and Hardy (2011) explain that two main conceptual models have guided research informing retention efforts in higher education. One model places responsibility on the institution for creating policies, programs, and offering support for students, the other focuses on students, considering their levels of preparation and motivation necessary to succeed in college. They further explain that community college students are non-normative and are increasingly diverse. Students enter college from a variety of backgrounds, academic settings, and with varying educational needs/goals. Given this diversity of student experiences and needs, and the ongoing search to find ways to improve institutional effectiveness, new directions of inquiry are needed.

There has been a gradual shift toward using additional conceptual models for exploring factors related to student success that open classroom doors and illuminate factors influencing the instruction students receive. Biggs and Tang (2011) report that turning attention in higher education to the quality of teaching has been a significant shift since 2000 as a result of the rise of college attendance and greater diversity of student populations. They argue that to address issues of institutional effectiveness, colleges must examine the "quality of teaching and learning" that students experience (p. 3). An area of research opportunity that has long been overlooked is learning more about community college educators and the factors that influence their effectiveness.

Rationale for the Study

Kezar and Maxey (2014) argued that the time has come to reevaluate faculty work with the goal of reforming outdated institutional structures thereby increasing institutional effectiveness. Adjunct faculty are on the front lines of educating U.S. undergraduates yet are understudied in comparison to full-time tenured faculty and even compared to graduate teaching assistants. They enter into teaching with a broad range of experiences and motivations for

teaching. Kezar (2013) explained that adjunct faculty are a non-normative group and that there is a gap in the research exploring how adjunct faculty experience their working conditions. She asserted, "One of the most fundamental questions that scholars need to understand about non-tenure track faculty (from their own perspective) is how they experience their work lives" (p. 3). She reported that most research in this area is based on large-scale surveys that are limited in providing insight into the experience of adjunct faculty. It is important to understand factors that influence adjunct faculty's work experience because research has demonstrated that they often do not receive the support that they need and are therefore less effective than tenured or tenure track colleagues (e.g. Umbach, 2007). Findings of this nature should be interpreted with caution as issues related to adjunct faculty's teaching are often directly related to their working conditions (Gappa & Leslie, 1993). When such issues impact the instruction adjunct faculty are able to provide, students' learning and overall institutional effectiveness are negatively affected.

To learn more about adjunct faculty as educators and about the relationship between working conditions and teaching beliefs, this study explored personal and contextual factors that influenced their teaching self-efficacy. Self-efficacy is an extensively researched and evidence-based motivational framework (Bandura, 1997). In the context of education, teaching self-efficacy has been shown to influence instructional decisions, the selection of appropriate instructional strategies, the implementation of multiple teaching techniques, and persistence in helping struggling students (Tschannen-Moran et al., 1998). Bandura (1997) distilled sources of self-efficacy beliefs into four main categories: (a) mastery experiences, (b) social/verbal persuasion, often in the form of feedback, (c) vicarious experiences, and (d) affective or emotional experiences. Contextual factors play a key role in the development of efficacy by providing affordances in multiple categories. In the context of teaching in higher education,

feedback from students or from other evaluative experiences is an example of social/verbal persuasion that can influence teaching self-efficacy. Positive or constructive feedback can boost teaching self-efficacy while negative feedback can have a detrimental effect. The availability of supportive services and individuals (or lack thereof) can either promote or hinder teaching self-efficacy beliefs. The influence of these supports is particularly strong among novices with few mastery experiences (Bandura, 1997; Christensen, 2012).

Researching adjunct faculty at MACC provided a unique opportunity to study part-time instructor's teaching self-efficacy in context with supports that are exemplary in comparison to many institutions. Exploring beliefs among adjunct faculty in this context is an important first step in linking institutional policies and procedures with their competency beliefs as teachers and subsequent instructional practices that directly influence student outcomes. This study adds to the teaching and learning literature in higher education and has tremendous practical significance. Information learned can be used to inform polices and procedures supportive of adjunct faculty and their teaching not only at community colleges, but also four-year institutions. Discussions about how to more effectively support adjunct faculty are more prevalent now than at any earlier time. Findings from this study will be useful in guiding and advancing these discussions. Unlike previous studies that focus solely on adjunct faculty's job satisfaction, this study connects working conditions to teaching beliefs that have been shown to influence instructional behaviors. This is an important first step in working toward gaining insight into student learning conditions.

Research Questions

The following research questions guided the study:

1) How do adjunct faculty perceive their teaching self-efficacy in the areas of instructional skills and creating positive learning environments?

2) Do levels of teaching self-efficacy differ by demographic variables and teaching appointment?

3) What is the relationship between teaching-related support services provided by the college and adjunct faculty's teaching self-efficacy?

4) What do adjunct faculty identify as sources, challenges, and supports that influence their teaching self-efficacy?

5) In what ways do interviews with adjunct faculty explain selected data from the surveys?

Participants

At MACC, approximately 460 adjunct faculty teach over 75% of the courses. MACC provides exemplary examples of institutional efforts to integrate and support adjunct faculty. Studying adjunct faculty at MACC provided a unique opportunity to explore the relationship between institutional factors and teaching self-efficacy. Exploring teaching self-efficacy beliefs among adjunct faculty in this context was an important step in linking institutional policies and procedures with their competency beliefs and subsequent instructional decisions.

Methodology

An explanatory sequential mixed methods design was used with the rationale that the combination of quantitative and qualitative methods "…provides a better understanding of research problems than either approach alone" (Creswell & Plano Clark, 2011, p. 5). Large-scale surveys of adjunct instructors have provided limited insights, and research highlighting differences in faculty teaching self-efficacy has failed to adequately explain those differences (e.g. Fives & Looney, 2009).

First, a modified version of the College Teaching Self-Efficacy Scale (Prieto Navarro, 2006) was administered online. This survey was designed for use with college faculty based on best practices research in higher education teaching. The survey link was sent to all adjunct faculty at the College and (n = 159) completed the survey. Demographics and data capturing teaching experience and appointment were also collected. To gain insight into the relationship

between contextual variables and teaching self-efficacy, adjunct faculty's experience with programs and polices implemented by MACC to support their teaching were surveyed. Open-ended questions on the survey allowed for further elaboration. Differences in teaching self-efficacy based on demographic variables and data trends that emerged from the surveys were selected for further explanation and elaboration in subsequent interviews. (Creswell & Plano Clark, 2011). For the interviews, a diverse sample of adjunct instructors (n = 9) was identified via purposeful sampling from lists of potential participants provided by administrators at the College. Adjunct faculty were selected for interviews to maximize variability (Merriam, 2009). Both new and experienced instructors, male and female, and those teaching in each of the three academic divisions of the College were represented. Following analyses, quantitative and qualitative data from both phases of collection were merged to create an overall interpretation of MACC's adjunct faculty's teaching self-efficacy and the factors that influenced their beliefs (Creswell & Plano Clark, 2011).

Summary of Results

This was an experienced group of educators with an average of nearly 10 years of higher education teaching experience. Overall, teaching self-efficacy beliefs of adjunct faculty at MACC were high. Adjunct faculty revealed motivations for teaching including the desire to become full-time faculty and finding teaching personally rewarding. Creating a positive classroom environment and context expertise were perceived as areas of teaching strengths. Teaching self-efficacy beliefs in the area of assessing student learning were rated lowest. Adjunct faculty in this study were critically reflective educators and described efforts to improve their teaching including self-initiated solicitation of student feedback.

Principle components factor analysis of survey items yielded three distinct factors: (a) instructional skills, (b) creating a positive classroom environment, and (c) assessing student

learning. On a six-point scale with six meaning completely confident and one meaning not at all confident, creating a positive classroom environment, instructional skills, and overall teaching self-efficacy were all rated above (M = 5.00). At slightly below (M = 5.00), assessing student learning was rated lowest. Teaching self-efficacy beliefs differed slightly based on gender. Females had higher scores than males in the areas of instructional skills and assessing student learning but not in overall teaching self-efficacy or creating a positive classroom. One-way analyses of variance revealed differences based on years of higher education teaching experience. Adjunct faculty with five or fewer years of experience had lower efficacy beliefs than those with more than six years' experience in instructional skills, creating a positive learning environment, assessing student learning, and overall teaching self-efficacy. No differences were found based on academic discipline taught, level taught, teaching format, or race/ethnicity.

Correlational analyses were conducted to explore the relationship between teaching self-efficacy beliefs and teaching support services provided by the College. Student evaluations of teaching predicted higher efficacy beliefs in instructional skills, creating a positive environment, and overall teaching self-efficacy. Participating in convocation predicted higher beliefs in the same three areas. Neither was significantly related to efficacy beliefs in assessing student learning. No statistically significant relationships were found between efficacy beliefs and trainings/workshops, the adjunct evaluation process, or formal mentoring relationships. However, evidence for the positive influence of these services did emerge from the second phase of data collection.

Qualitative data from open-ended survey items and interviews with adjunct faculty shed light on differences that emerged in the quantitative analysis and provided a great deal of insight

into sources of teaching self-efficacy. For example, differences in sources of teaching self-efficacy emerged based on experience. Veteran adjunct instructors identified accumulated mastery experiences as the most important source of efficacy beliefs. Inexperienced instructors identified social/verbal persuasion in the form of feedback from students, full-time faculty mentors, and classroom observations as paramount in influencing their beliefs, followed by teaching-related experiences, positive emotional experiences, and vicarious experiences i.e. comparing oneself to others. Although a few instructors felt a lack of support by others at the College, many shared positive observations and identified multiple supports. Department chairs, full-time faculty, administrators, and support staff were all identified as positive sources of support. Many adjunct faculty also offered praise for the positive, welcoming environment of the College in which they felt a shared sense of mission and commitment to student learning.

Along with factors that promoted teaching self-efficacy, challenges to those beliefs were also identified. The most frequently identified challenge to adjunct faculty's teaching self-efficacy beliefs at MACC was accommodating the needs of a diverse range of student learners. Other challenges related to serving students included students' lack of preparedness for college-level work, lack of effort/motivation, and students' multiple pressures outside of the classroom that affect their academic performance. Adjunct faculty also shared challenges related to working conditions including balancing the time needed for teaching related activities with low compensation, lack of job security, lack of effective onboarding, and communication issues. These challenges were discussed in direct connection with teaching self-efficacy and subsequent instructional decisions.

Merged analysis of both quantitative and qualitative data supported meta-inferences about efficacy beliefs and recommendations for the future. Adjunct faculty expressed the desire

for more connected and collaborative work environments that offer opportunities for increased interactions with both full-time and other adjunct faculty. This would provide valued opportunities to share ideas, instructional strategies, and teaching resources thereby promoting efficacy beliefs. The need for training in teaching skills emerged as an important finding. Instructors shared thoughts on both the format and content of trainings that would boost their teaching self-efficacy. They expressed the desire to have more training opportunities offered at flexible times and online. Trainings should focus on teaching skills such as creating assessments, grading, theories of learning, and how to teach a diverse range of learners.

Adjunct faculty's support needs are not "one size fits all" and differ by years of experience. New adjunct faculty need more effective onboarding processes, feedback, and explicit guidance in policies, classroom procedures, and expectations to boost teaching self-efficacy. Experienced instructors also need continued training opportunities to develop an expanded repertoire of teaching skills and they expressed the desire to have revised pay scale structures based on years of teaching at the College, priority class assignments, and a voice in textbook selection and curricular decisions. Both expressed the need to learn more about working teaching a diverse range of student learners and for training in creating assessments and grading.

Finally, system-wide challenges related to existing higher education employment structures that fail to adequately support adjunct faculty also influenced their teaching self-efficacy. Adjunct faculty explained that they do not feel adequately compensated for the time it takes to plan, teach, grade, and interact with students outside of class time. This, along with not knowing if they will be hired from semester-to-semester influences their motivation. Last minute hiring and lack of consistent and comprehensive onboarding processes also contribute to

feelings of being overwhelmed and unprepared, thereby negatively influencing teaching self-efficacy. This provides evidence that offering teaching-related support is not enough. Existing institutional structures, policies, and practices must be reviewed and revised to meet the needs of adjunct faculty. Though evidence of these challenges emerged in the current study, MACC is an example of an institution that is moving in the right direction and has successfully implemented evidence-based teaching support services that positively affect adjunct faculty's teaching self-efficacy. This study provided evidence for the value of continuing and expanding these services.

Definition of Terms

Following are key terms defined as used throughout the study.

1) *Adjunct faculty*: Part-time, contingent faculty hired on a semester-by-semester basis for the purpose of teaching. Adjunct faculty do not typically have benefits nor guaranteed employment. (AAUP, 2014). The terms adjunct faculty and instructor were used interchangeably throughout the study. This is reflective of the terminology used at MACC.

2) *Non-tenure track faculty (NTTF)*: Faculty not on the traditional track to earn tenure. NTTF can include both full-time (term) and part-time faculty (Kezar, 2013).

3) *Term faculty*: Faculty who are not on the tenure-track but are employed full-time. Term faculty frequently receive benefits, have job security, and have teaching and advising loads comparable to tenure-track colleagues (Kezar, 2012).

4) *Full-time faculty*: Faculty who are tenured or tenure eligible.

5) *Self-Efficacy*: Beliefs in one's ability to be successful at a given task (Bandura, 1977).

6) *Teaching self-efficacy*: "…the teacher's belief in his or her capacity to organize and execute courses of action required to successfully accomplish a specific teaching task in a particular context" (Tschannen-Moran et al., 1998, p. 233).

7) *Instructional skills:* Personal abilities needed to perform a specific pedagogical task. Previous research in this area has used the term instructional strategies (e.g. Prieto Navarro, 2005; DeChenne et al., 2012). The term *skill* captures the specific teaching behaviors targeted in this study more effectively than the term *strategy* that connotes an approach rather than behavior.

Chapter Two: Review of the Literature

The following section provides an overview of literature relevant to the current study in the areas of community college adjunct faculty, self-efficacy, teaching in higher education, and college teaching self-efficacy. Literature was found using electronic database searches (e.g. Web of Science, JSTOR, Academic Search Complete, PsychINFO, ERIC, Google Scholar) and review of in-print sources. Among others, keywords for searches included adjunct faculty, contingent faculty, part-time faculty, non-tenure-track faculty, community college teaching, self-efficacy, teaching self-efficacy, and faculty teaching self-efficacy. Research was vetted and considered for inclusion in the current review according to the AERA's (2006) Standards for Reporting on Empirical Social Science Research. Standards include, the research clearly identifies contribution to knowledge, reporting includes a review of relevant scholarship, rationale for conceptual, methodological, theoretical orientation described, clear logic of inquiry and unambiguous description of design. An overview of the current professional landscape of adjunct faculty is presented and gaps in the literature focusing on adjunct faculty's instructional behaviors and beliefs as teachers are identified. This is followed by a review of the theoretical and conceptual frameworks guiding the study: social-cognitive theory, self-efficacy, and teaching self-efficacy in the K-12 settings. Finally, a summary of literature identifying the characteristics of quality teaching in higher education and a review of the relatively new teaching self-efficacy literature in higher education are presented.

Professional Landscape of Adjunct Faculty

Economics of Adjunct Faculty Labor. Adjunct faculty are currently responsible for providing the majority of instruction in U.S. institutions of higher education. According to Curtis (2014), based on information from the Fall Staff Survey conducted by the U.S. Department of Education National Center for Education Statistics, between 1975-2011, the percentage of contingent instructional staff grew 21%, from 55.4% to 76.4%. The same report also presents the rate of growth over time in instructional staff employment. Between 2001-2011, 93.4% of the growth in instructional staff employment in higher education is attributable to contingent positions. In comparison to full-time faculty, the population of contingent faculty is disproportionately comprised of females and minority employees. Most adjunct faculty hold advanced degrees, represent a wide range of ages, and bring diverse life experiences to the classroom.

Employment trends in higher education are driven by economic fluctuations. The increased use of temporary and part-time faculty increases institutions' flexibility and reduces labor costs (Monks, 2007). Liu and Zheng (2007) explained that reductions in governmental funding, revenue changes, increased consumerism among students and families, and unpredictable fluctuations in enrollment have "…resulted in a series of institutional behaviors parallel to those that occur in a competitive market" (p. 4). Doing so requires institutions to find ways to reduce costs and gain economic efficiency in order to survive challenging economic times. An area that has experienced the most significant transformation is in the reduction of full-time tenured faculty and an increase in adjunct, contingent faculty. Adjunct faculty are paid significantly less than tenure-track faculty. In Liu and Zheng (2007), research based on data from the 1999 National Study of Postsecondary Faculty revealed that part-time, non-tenure track faculty are paid approximately 64% less per hour than comparable full-time tenure track assistant

professors. Contingent faculty are hired on a semester-by-semester basis and are typically not eligible for benefits, saving the institution additional financial resources.

Liu and Zheng (2007) derived their view of the working conditions of adjunct faculty from the organizational framework of internal labor market theory. They explain that organizations modify employment practices to maximize resources and minimize costs. Doing so creates a core-periphery division of labor within an institution. Core employees receive higher wages, experience favorable working conditions, and have job security. In contrast, peripheral employees are paid less, experience less-favorable work conditions, and lack job security. In higher education, core employees (full-time faculty) are supported with resources and a tenure/advancement system that provides job security, support, and opportunities for professional development. This is not the case for part-time, peripheral adjunct faculty. The authors further argue that the part-time employees are more likely to be assigned less favorable tasks instructional tasks including teaching "…large classes, multiple sections of the same course, instructional or remedial courses, and classes at unfavorable working hours" (p. 7). Additionally, adjunct faculty are not encouraged to participate in departmental business. "Therefore, part-time faculty can be viewed as peripheral academic workers in core positions who do not have access to tenure and whose working conditions are substantially inferior to those holding tenure-track positions" (p. 7).

These issues are paramount in U.S. community colleges where the majority of instruction is provided by part-time faculty. The Center for Community College Student Engagement (2014) reported that 58% of U.S. community college classes are taught by adjunct faculty. The report further states, contingent faculty "…have become a fundamental feature of the economic model that sustains community college education" (p. 2). Employing adjunct faculty is a cost

effective way of providing instruction that requires low financial commitment in comparison to full-time faculty and allows for flexibility in hiring in response to fluctuations in enrollment. However, there is a point when cost savings undermine institutional effectiveness. Gappa and Leslie (1993) argued, "At some indeterminate point, adding part-timers creates substantial hidden costs to the institution. These hidden costs are behind the concerns about whether quality can be sustained when part-time faculty are employed in substantial numbers" (p. 102). Although the core mission of community colleges is teaching, little is known about those providing the majority of instruction. Moving from the broad landscape view, a closer exploration of adjunct faculty's characteristics, motivations, and how they experience their working environments brings issues stemming from the practice of hiring part-time faculty yet failing to provide adequate support into sharper focus. This is an essential step in building the case for increasing institutional investments in the support and professional development of adjunct faculty. In the following section, a review of studies that have made progress in advancing an understanding of adjunct faculty's work experiences is presented.

Adjunct Faculty's Working Conditions. While relatively few studies explore how adjunct faculty experience their work environments, there are notable exceptions. First, Gappa and Leslie (1993) interviewed 240 part-time faculty members along with a range of administrators, department chairs, and faculty leaders for a total of 467 individuals at seventeen U.S. colleges and universities with the goal of understanding the experience of adjunct faculty. The authors indicated that a central theme that emerged from the work was the perceived division of faculty labor in the "haves" and "have-nots." They further explained that the faculty system is divided into "castes." They argue that this division is "damaging to the general ethic of

community that academics have long honored and also damaging to the quality of education" (p. 12).

According to Gappa and Leslie (1993), the gap between the full time "haves" and the part-time "have-nots" was created by a number of factors. They explained that part-time faculty offer quality education without a big-investment that allows for an easy severing of ties if the adjunct is no longer deemed necessary. Responsibility for adjunct faculty is often diffuse; it is not always clear who is responsible for providing adjunct faculty training and supervision. In addition, part-timers identify lack of support, inadequate space, and absence of a formal evaluation process as factors that foster feelings of inferiority. This comprehensive work examined issues of adjunct employment from multiple perspectives and offers suggestions for policies and practice. These suggestions ranged from providing decent and consistent treatment, establishing a representative body to give advice on adjunct policies, publishing an adjunct faculty manual and communicating the message that adjunct faculty are valued. Gappa and Leslie explained that reforms of this nature are necessary to advance the employment experience of adjunct faculty and the overall mission of institutions of higher education.

Kezar (2013) provided additional insight into personal factors that influence how adjunct faculty experience their work environments. Based on interviews with a total of 107 non-tenure-track faculty (58 part-time and 49 full-time/term) across 25 departments in three institutions, she enumerated several key influences. It should be noted that she did not differentiate between the experience of full-time non-tenure-track-faculty (NTTF) and part-time NTTF in reporting her results. First, she identified life phase as a condition that shaped NTTF's views of the extent to which they felt supported in their departments. Her interviews revealed that phase of life and current priorities including child-care, early career, and being new to teaching influenced the

perceptions of departmental support. She found that caregiving for a dependent family member "…made an individual less focused on departmental supports" (p. 19). Next, she explained that the credentials held by NTTF impact how support is perceived. She explained that individuals with master's degrees did not have the same expectations for support as those in doctoral programs or with Ph.D.s. Third, external employment and professional status outside of academia also influences NTTF's perceptions of their work environments. When NTTF had adequate pay, access to resources/supplies, and status from other jobs, they expressed less dissatisfaction with the absence of institutional supports than peers without comparable employment experiences. The final personal factor identified was career path. Kezar specifically mentioned the challenges experienced by faculty who were formerly tenure-track but gave up those positions, usually due to a dual-career partner's transition. Individuals who became NTTF after leaving the tenure track expressed dissatisfaction and perceived lack of departmental support as problematic.

Also according to Kezar (2013), in addition to personal experiences, NTTF's experiences can vary significantly by academic department. Departmental size, social environment, department chair, and polices all impact NTTF's experiences. NTTF in large departments such as English or math may have 100 or more adjunct faculty. Oversight and support of large numbers of part-time faculty presents additional challenges to departmental resources. Further, lack of opportunity for supportive relationships, department chair turnover, and lack of written policies all contribute to feelings of disconnection and perceived lack of support.

Gappa and Leslie (1993) argued that in order to create policies that promote supportive work environments for contingent faculty, one must gain an understanding of adjunct faculty's experiences within an institutional context. A recent study at a large, four-year university serves

as an exemplar in this vein of research. In one of the most comprehensive studies of adjunct faculty at a single institution to date, Allison, Lynn, and Hoverman (2014) surveyed 240 contingent faculty about working conditions at the university including teaching loads and compensation, time management, job market histories, resources, accessibility and safety, perceptions of equitable treatment, effects of working conditions on students' experiences. Results indicated contingent faculty were suffering financial hardships, and working at poverty or near poverty levels. The authors reported that 85% of the respondents were motivated to teach by passion for teaching. An interesting area surveyed was hidden or unpaid labor. Most respondents expressed that they devoted extra time and efforts to their jobs because they care for students but only 26% of those surveyed expressed a belief that this was recognized or valued by their institutions. Hidden labor included extra hours spent planning and preparing, advising/meeting with students, writing letters of recommendation, etc., all tasks that when combined, represent hours of uncompensated labor. This comprehensive study supported previous research and provided insight into previously unexplored areas of adjunct faculty's working conditions.

Introducing Adjunct Faculty

In a report on the state of contingent employment and the academic profession, the American Association of University Professor's Committee on Contingent Faculty and the Profession (2014) observed "…the use of the term 'contingent' calls attention to the tenuous relationship between academic institutions and the part-and full-time non-tenure- track faculty members who teach in them" (AAUP, 2014, p. 170). Adjunct faculty's experiences vary by type of institution: community college, four-year, public, or private. Research focusing on adjunct faculty in the community college setting is more abundant than for four-year institutions

as community colleges have historically employed higher numbers of adjunct faculty than their four-year counterparts. Roueche, Roueche, and Milliron (1995) posited, "…part-timers have been employed as faculty since community colleges were first established" (p. 2). Community colleges relied on their expertise to diversify the types of courses they were able to offer students, thereby increasing enrollment and growing the institution.

Data from the Community College Faculty Survey of Student Engagement provided insight into characteristics of adjunct faculty teaching at U.S. community colleges. From 2009 to 2013, 71,451 full and part-time faculty completed the survey. This, coupled with data from 32 focus groups, painted a detailed landscape of student engagement including faculty's perceptions of students' experiences, teaching practices, and "…how connected students are to college faculty and staff, other students, and their studies—and institutional practice" (p. 2). According to the Center for Community College Student Engagement (CCCSE), part-time faculty are more likely to be new to teaching with 37% having fewer than five years of experience in comparison to 13% of full-time faculty (CCCSE, 2014). Adjunct faculty are also more likely to teach developmental education courses designed for students who need help building basic skills in areas such as English or math. Only 5% of full-time faculty teach only developmental courses in contrast to 16% of adjunct faculty that report teaching only developmental courses. There are fewer advanced degrees among part-time faculty, with 13% reporting bachelor's as the highest degree earned, this is true for only 8% of full-time faculty, and while 18% of full-time community college faculty surveyed have a doctorate, the same is true for 11% of adjunct faculty. Although CCCSE (2014) acknowledged that professional concerns and motivations vary among adjunct faculty, responses from the survey and the focus groups added further evidence to adjunct faculty's needs for comprehensive orientation programming, professional

development, evaluation, and performance-based incentives. The report highlighted the key message that although the roles and concerns of part-time faculty may vary across colleges and even within the same college, "…what really should and often does matter most to part-time faculty is the same: effective instruction and support for students. It is the institution's job to create the conditions that encourage and enable that work" (p. 3). This report provided valuable insight into the current climate for adjunct faculty at U.S. community colleges and a springboard for diving deeper into the experiences and motivations of this group of educators.

Adjunct Faculty Types and Motivations

Tuckman (1978) was one of the first researchers to explore the diversity of motivations and career aspirations of adjunct faculty. He identified seven mutually exclusive categories of adjunct faculty ranging from "hopeful full-timers" to those teaching part-time in addition to full-time work. This was instrumental in breaking down the stereotype of adjunct faculty as a homogeneous population and guiding subsequent research. In a reconceptualization of Tuckman's typology, Gappa and Leslie (1993) identified four categories of adjunct faculty based on "…academic background, employment history, and motivations" (p. 45). Their four categories included: career enders; specialists, experts, and professionals; aspiring academics; and freelancers. As described by the authors, career enders "include those who are already fully retired and those who are in transition from well-established careers (mostly outside of higher education) to a preretired or retired status in which part-time teaching plays a significant role" (p. 47). Individuals categorized as specialists, experts, and professionals usually have a full-time job outside of higher education and represented a wide range of professions and experiences. These individuals become adjunct faculty for intrinsic motivations such as the love of teaching rather than need for additional income. The third category is aspiring academics. This is comprised of those with the "…career aspiration not necessarily to teach full-time but to be fully participating,

recognized and rewarded members of the community with a status at least similar to that currently associated with tenure-track or tenured faculty" (p. 48). This includes part-time faculty holding a terminal degree that aspire to have full-time academic careers such as doctoral students. Also in this group are those known as "freeway fliers," described as adjunct faculty that are employed at multiple institutions. Freelancers represent the final category of adjunct faculty. This category of faculty is described not as aspiring academics, but have several part-time jobs that together, comprise their current career. Gappa and Leslie (1993) provided substantial insights into the characteristics and experiences of adjunct faculty.

As an extension of work in this vein, in recent years, a few researchers have explored some of the positive aspects of part-time teaching that motivate adjunct faculty to persist notwithstanding workplace challenges. In a mixed method study at a large state university, Feldman and Turnley (2001) explored the relationship between adjunct faculty's job satisfaction and career stage. In addition to the frequently cited areas of dissatisfaction (lack of support, inadequate pay, etc.), adjunct faculty identified rewarding aspects of their jobs. They expressed an appreciation for flexibility in scheduling classes that allowed for managing personal and professional obligations. Further, contact with colleagues, job autonomy, and job challenge were identified as positive aspects of adjunct work. Along with these findings, there were distinct differences found in attitudes toward their work and job satisfaction between early, mid-, and late career adjunct instructors. Early career instructors verbalized an appreciation for the acquisition of teaching experience deemed necessary for full-time positions but expressed concerns about "getting stuck" in adjunct positions. Mid-career adjunct faculty discussed feeling autonomous and enjoying the flexibility of adjunct work, but also struggled with difficulty planning for the future given their part-time status. Job satisfaction and professional performance were higher

and feelings of "relative deprivation" in comparison to full-time faculty were lower among late-career adjunct faculty (p. 10). This study provided an insightful glimpse into perceived costs and benefits of adjunct work in addition to how these vary across career stages.

As part of a comprehensive survey of working conditions for contingent faculty at a large four-year university, Allison et al. (2014) also explored adjunct faculty's motivations. They reported that 73% of contingent faculty felt passionate about teaching and 67% enjoyed their work. University contingent faculty expressed enthusiasm for working with students and frequently engaged in uncompensated extra work time "…because they are motivated to succeed and not to do a merely tolerable job" (p. 22). Their work provided evidence for adjunct faculty's commitment to students and to providing the best possible instruction. One of the challenges of research in this area is gaining an understanding of the professional experiences of adjunct faculty while keeping the diversity of their motivations and experiences in mind. However, rather than becoming lost in a labyrinth of adjunct faculty's diverse motivations and experiences and allowing focusing on differences to impede work in this area, taking a different approach of exploring commonalities among adjunct faculty, namely their shared role of teacher, offers an area ripe for exploration.

Adjunct Faculty and Student Outcomes

Adjunct faculty are most often hired for the sole purpose of teaching. It is not uncommon for new adjunct faculty with little to no teaching experience to be asked to provide instruction to large classes of diverse learners without training and with minimal lead time to prepare prior to the commencement of classes (Allison et al., 2014). Adjunct instructors often bring valuable knowledge and experience into the classroom, and although some may be "less experienced and slightly less educated than full-time faculty," as among the ranks of full-time faculty, some are excellent teachers and some are less-than-stellar (Jolley et al., 2014, p. 223). It is difficult for

adjunct faculty to offer optimal instruction when they have a vastly different work environment and inadequate training and resources in comparison to full-time counterparts. As an example, returning to the work of Allison et al. (2014), contingent faculty cited several significant challenges to providing optimal teaching. First, last minute hiring, at times only one week in advance of the start of classes, gives adjunct faculty inadequate time to prepare for their classes. Lack of orientation and lack of direction about teaching were also cited as problematic. Adjunct faculty in the study compared beginning their teaching careers to "…being tossed in the pool and told to start swimming" (p. 33). Allison and colleagues identified lack of guidance when first starting to teach as one of the most frequently mentioned topics by participants in the study. Though this may be true of teaching in higher education in general, adjunct faculty in this study identified lack of orientation, training, and guidance as impediments to providing effective instruction.

The relationship between adjunct faculty's teaching and student outcomes is complex and variable. As with teachers at any level of education, there are stellar adjunct faculty and there are those that provide substandard instruction. Researchers have attempted to gain insight into trends in student outcomes that are hypothetically related to exposure to adjunct faculty's teaching. The findings have been mixed. Wallin (2004) argued, "No recent study has found a significant difference in the quality of instruction provided between adjunct and full-time faculty" (p. 382). She goes on to bring attention to the issue of "blaming the victim when adjunct faculty to not meet expectations" and references Gappa and Leslie (1993) who stated:

> Part-time faculty are not responsible for whatever declines may be occurring in the quality of postsecondary education. Rather, colleges and universities should look carefully within themselves to question whether they have done all they can to support good instruction, committed faculty, and effective programs. Where part-time faculty do not have the proper tools to do their jobs…it is usually because the institution has failed in some way to provide what is needed. (p. 13)

This highlights the importance of identifying and exploring how contextual factors influence adjunct faculty's beliefs about their abilities to successfully do their jobs.

A conflicting vein of research focusing on adjunct faculty takes a different approach to understanding their teaching by adopting a deficit perspective. Some research has suggested that negative student outcomes can be linked to adjunct faculty's instruction. Based on his analysis of the NCES IPEDS dataset, Jacoby (2006) found "…community college graduation rates decrease as the proportion of part-time faculty employed increases" (p. 1100). The authors acknowledged that they were unable to identify the "specific mechanism" associated with classes taught by adjunct faculty that reduces student graduation rates. Rather than attributing the negative outcomes to substandard instruction provided by adjunct faculty, Jacoby hypothesized, "Differences between part-time and full-time instructional practice may be explained as consequences of part-time contracts rather than as the consequence of lower faculty qualifications" (p. 1085). This acknowledges that student outcome deficits associated with adjunct faculty's teaching are more likely due to lack of institutional resources and support rather than lack of competency. This data also reflects the relationship between the number of adjunct faculty and student outcomes at the institutional level, and does not facilitate insight into teaching at the level of the individual instructor.

In another approach to exploring the influence of adjunct faculty's teaching in the context of community colleges, Eagan and Jager (2009) focused on the relationship between student transfer rates and adjunct faculty's teaching. They explained that although emphasis on the transfer function of community colleges is but one of an array of training and educational functions. Transferring to a four-year institution remains an aspiration of many community college students. In a study of community college students across 107 institutions using

hierarchical generalized linear modeling (HGLM), Eagan and Jager (2009) found that as students' exposure to part-time faculty increased, their likelihood of transferring to a four-year institution decreased. Further, "…the effect of exposure to part-time faculty becomes much more pronounced as students spend more time in the classroom with part-timers" (p. 182). They reported that students who had all classes taught exclusively by part-time faculty were 20% less likely to transfer than peers taught exclusively by full-time faculty. As a final point, the researchers highlighted a key finding that "…the negative effects associated with the employment of part-time faculty actually occur more at the individual level rather than the institutional level" (p. 183). In other words, students' academic performance is affected more by the individual experiences with part-time faculty including lack of accessibility and disengagement rather than contextual factors at the level of the institution such as overall number of part-timers employed. The authors cited part-time faculty's detachment and lack of knowledge about transfer policies as possible factors that negatively influence transfer rates. An important take-away from this work is that it reveals nothing about adjunct's teaching competencies and it "…does not support cause-and effect conclusions between exposure to part-time faculty and students' likelihood to transfer to a four-year institution" (p. 178). Work in this vein provides evidence that additional research is needed to learn more about the specifics of adjunct faculty's teaching competencies.

Umbach (2007), a frequently cited study in this area, analyzed a sample of faculty data from the 2004 Faculty Survey of Student Engagement to assess the effectiveness of contingent faculty. Umbach defined faculty effectiveness as "…faculty behaviors that engage students in good practices in undergraduate education" (p. 94). Six composites were constructed to represent use of instructional practices linked to student learning and development including

active and collaborative learning techniques, academic challenge, time spent preparing for class, and faculty interactions with students. A series of hierarchical linear models (HLM) were conducted to explore characteristics of faculty and their institutions associated with student learning outcomes. Umbach reported that in general, "…contingent status, particularly part-time status, is negatively related with faculty job performance related to undergraduate education" (p. 102). Further, he found that part-time faculty used active and collaborative strategies less often than full-time faculty. It is important to note that Umbach emphasized the limitations of this work and acknowledged the small effect sizes he obtained. He argued that lack of support and training negatively affect adjunct faculty's teaching and that increasing support and training would likely improve their effectiveness as faculty.

As an illustration of adjunct faculty's tendency to employ less effective instructional techniques than full-time faculty, Baldwin and Wawrzynski (2011) also analyzed data from the 2004 National Study of Postsecondary Faculty to explore the divergence in instructional strategies between full-time and contingent faculty. They found that contingent faculty "…are less likely to use learning-centered strategies such as essay exams, term research papers, multiple written drafts of work, oral presentations, group projects, or student evaluations of each other's work" than full-time tenure track faculty (p. 1494). These instructional decisions impact student learning and success, and subsequently, retention rates, enrollment, and the overall mission of institutions of higher education. These quantitative analyses indicated a relationship between students' outcomes and exposure to adjunct faculty instruction but were unable to shed light on specific factors. In addition to lack of insight into specifics about adjunct faculty's teaching, mixed research findings about student outcomes associated with exposure to adjunct faculty have

done little to advance an understanding of how working conditions affect their beliefs about their instructional abilities and subsequent student learning outcomes.

Adjunct Faculty's Perceptions of Teaching Competencies

A few additional researchers have broken ground in exploring adjunct faculty's perceptions of practices and policies that influence their instructional behaviors. Jolley, Cross, and Bryant (2014) sought to understand adjunct faculty pedagogical practices. They focused on perceived challenges to providing instruction. They explored "how institutions monitor and provide instructional resources that support adjunct faculty" with particular emphasis on evaluation processes as both a formative and summative tool for enhancing teaching (p. 224). Based on interviews with 20 current and former adjunct faculty from a range of community colleges across the US, their research began to weave a thread connecting lack of institutional resources and support with instruction. Individuals in this sample expressed feeling their institutions had neglected to adequately assess and provide feedback about teaching. Adjunct faculty expressed frustration about the perceived lack of support and feedback for instructional practices, one reported teaching over 200 classes with the only feedback provided in the form of student evaluations of teaching. Adjunct faculty reported feeling invisible; "…unnoticed and undervalued as academic and individual entities on campus" (p. 225). This study added insight into the plight of adjunct faculty functioning in systems that do not provide consistent and meaningful assessments of their performance in the classroom.

In a phenomenological study, Diegel (2013) explored how both adjunct faculty and department chairs perceived support, mentoring, and professional development opportunities for part-time faculty. This was a single institution case study at a large community college and unlike many previous studies of adjunct faculty, participants identified resources and practices that promoted their professional development. Data was collected from interviews with 15

adjunct instructors, three division chairs, and a follow-up focus group with adjunct faculty. Based on the results of the study, department chairs and assigned mentors served as significant sources of support for adjunct faculty. In addition, adjunct faculty were able to utilize the Faculty Center for Teaching Excellence, a resource that provided professional development guidance and support for building instructional skills. Adjunct faculty in this study expressed an appreciation for professional development opportunities provided by the Faculty Center that promoted improved teaching skills and "…made them feel important" (p. 605). Regular communication with department chairs and mentoring relationships were also identified as ways adjunct faculty experienced increased connection and building of instructional skills. This study highlighted the importance of considering the institutional context when researching adjunct faculty's experiences. Practices, policies, and resources differ significantly by institution.

In further support of the need for enhancing competence as educators, adjunct faculty in the Maryland Community College system also expressed the need for professional development. Dolan et al. (2013) presented results of an in-depth questionnaire administered to 1,645 adjunct faculty in the Maryland community college system that queried demographics, information about their employment experiences as adjunct faculty, and areas of interest for professional development. First, the authors summarized that overall, adjunct faculty in their state "…are committed professionals who want the recognition of their status as educators as well as the professional development opportunities to increase their effectiveness in the classroom" (p. 43). In contrast to the assumption that the majority of adjunct faculty are employed at multiple institutions, only 16% reported teaching at two or more institutions, and a scant 2% taught at three institutions. Additional survey items were related to teaching experiences and areas of professional development that would be of interest to adjunct faculty. Asked to identify areas of

professional development, 76% of adjunct faculty surveyed expressed a strong preference for training related to classroom teaching methods and increasing motivation. Sixty-one percent named student assessment techniques, and 49% asked for support in using technology in the classroom. Other areas of interest included learning styles and educating diverse student populations (37%) and 37% also wanted to know more about strategies for fostering critical thinking. This work demonstrates that adjunct faculty are reflective about their instructional abilities and desire to build competence in key skills.

According to the AAUP (2017), not all adjunct faulty have professional careers outside of teaching and most teach basic, core courses rather than upper division specialized courses. For those that do have experience in specialized professions, sharing real-world experiences with students is valuable. A few studies have explored the profession to classroom transition that adjunct instructors with specialized professional backgrounds experience. For example, Pompper (2011) interviewed 32 adjunct instructors teaching public relations from multiple institutions to learn more about their teaching philosophies and practice-to-classroom transitions. Asked to explain their teaching philosophies, they voiced a preference for "real-world" approaches. Adjunct faculty in the sample described a difficult learning curve when first teaching and some reported lack of experience with teaching procedures such as creating a syllabus, designing a rubric, and planning lectures. They described feeling the need for accelerated efforts to "catch up." Adjunct faculty also identified effective use of classroom technology, grading practices, and difficulties associated with managing students' behaviors as areas of challenge in their teaching. This work supports the notion that adjunct faculty may offer strength in professional experience but lack of training about effective instructional practices and

inadequate support in developing them negatively influence their perceptions of their competence as teachers.

Nursing adjunct faculty represent another specialized group of professionals that have been researched with the goal of informing policies and practices that support and improve teaching. Due to shortages of full-time faculty, undergraduate programs in schools of nursing often rely heavily on adjunct faculty (Forbes, Hickey, & White, 2010). Citing a need to learn more about "…needs and identified problems of adjunct faculty related to their teaching role" with the goal of developing strategies supportive of faculty needs, increasing job satisfaction, and enhancing the quality of education for students, Forbes et al. (2010) surveyed 65 part-time nursing faculty in a medium-sized four-year research university (p. 118). The nursing adjunct faculty identified lack of resources, limited contact with faculty, and inconsistent messages as significant impediments to their teaching. Most notably, all participants in the study expressed a desire to attend a course or workshop on topics such as instructional design and creating assessments of student learning. Results indicated that nursing adjunct faculty in this sample believed that their effectiveness as instructors was influenced by inadequate institutional support and they identified a need for professional development opportunities to help strengthen teaching skills.

In the few studies summarized above, it is apparent that adjunct faculty recognize that lack of institutional support and the absence of training in instructional skills influence the quality of instruction they are able to provide. However, this is only part of the story. The missing piece is the potential role of adjunct faculty's motivational beliefs and how institutional variables influence those beliefs. Given their status as an understudied, often marginalized population, there is a gap in the literature that explores their beliefs as teachers. In the K-12

literature, there is evidence that teachers' beliefs play an important mediating role in instructional decisions, behaviors, and subsequent student outcomes. The following section summarizes this evidence, building the case for expanding research in this vein into higher education thereby adding in the missing piece that connects contextual variables to subsequent instructional behaviors.

Teacher Beliefs

Understanding adjunct faculty as teachers and the factors that influence instructional behaviors are relatively unexplored territories. In the K-12 literature, there is ample evidence showing that examining teachers' motivation and perceived competencies can provide insight into instructional decisions that subsequently affect student learning and success outcomes. Tschannen-Moran et al. (1998) proposed that exploring teachers' beliefs, specifically, their teaching efficacy, promotes insight into teachers' efforts, goals, and instructional behaviors. They explained that teachers who believe they are capable in their abilities to provide effective instruction plan and organize lessons more effectively, use a wider variety of instructional skills, and are more committed to teaching and meeting the needs of students in comparison to teachers with lower efficacy beliefs.

Providing further evidence of the importance of teachers' beliefs, Fives and Buehl (2012) conducted a comprehensive review of related literature. Based on their review of roughly 300 research articles, they posited that teachers' beliefs have three primary functions. First, they serve as filters for interpretation of information. Next, beliefs provide a framework for defining problems. For example, teachers with surface-level knowledge about driving student learning will fail to employ strategies that facilitate deeper levels of learning among their students. Last, teachers' beliefs guide action. The authors highlighted self-efficacy beliefs as particularly influential in guiding teachers' actions. Fives and Buehl concluded that teachers' sense of self-

efficacy guides the goals teachers set, effort, and perseverance in the face of challenges. Further, "These behaviors (i.e. decisions, effort, and persistence) then influence the quality of teachers' practices. The guiding function of beliefs emerges in their motivational abilities to move teachers to action" (p. 480). The actions that teachers perform in the classroom, guided by their beliefs, have a direct influence on students' learning outcomes.

Though no literature has been found that does so with adjunct faculty, this approach has been used with teachers in elementary and secondary settings and with faculty in higher education (e.g. Allinder, 1995; Morris & Usher, 2011; Fives & Looney, 2009; Chang, Lin, & Song, 2006). Before delving into this literature, the subsequent section will set the stage with a brief introduction to social cognitive theory and an overview of the motivational concept of self-efficacy. Based on the understanding that teachers' beliefs influence instructional behaviors and motivation, the current study will focus on exploring one set of beliefs, teaching self-efficacy, among adjunct faculty at a single institution using the framework of the social cognitive theory of motivation.

Social Cognitive Theory

Kezar and Sam (2011) challenged the negative assumptions about adjunct faculty and encouraged researchers to carefully consider theoretical frameworks to guide research in this area. The authors discouraged research that approaches adjunct work from a deficit perspective that focuses on ways that the new faculty majority of adjunct faculty detract from the overall mission of an institution. They argued that adjunct faculty have been framed as laborers rather than professionals and the typical business and economic theories used to explore issues of NNTF and that currently dominate literature in this area "…are not complete and can paint a distorted picture" of the landscape of NTTF's experiences (p. 1424). Studies that highlight deficits associated with exposure to adjunct faculty without exploring what is happening in the

classroom such as Jacoby (2006) and Eagan and Jager (2009) raise a red flag without providing insight into underlying causes. A different approach is necessary to yield meaningful insights that can guide institutional planning. Keeping this in mind, a deeper understanding of adjunct faculty's perceptions of their teaching capabilities and the contextual factors that influence those beliefs can be achieved by peering through the lens of educational psychology using social cognitive theory. This move from labor theory to motivational theory brings research to the level of the adjunct and will fill in the missing piece that connects context to behavior.

Social cognitive theory provides a useful framework for understanding human behavior. Scholars in this school of thought believe that individuals make meaning of experiences based on multiple sources of information including direct experiences, observations, and personal processes. For example, multiple individuals may have the same temporal experience but perceive and make meaning of the experience in different ways. Bandura (1997) delved deeply into the relationship between internal personal factors (cognitive processes, emotions, and biological events), behavior, and the external environment. He described the interaction between the three elements as "triadic reciprocal determinism" (p. 6). Each of the three elements represented in the triad contribute to an individual's evaluation of a given situation and of his or her ability to function effectively in that situation. Bandura noted that the relationship between elements is not static, rather it is bidirectional, malleable, and the level of influence each exerts is context dependent. See Figure 1.

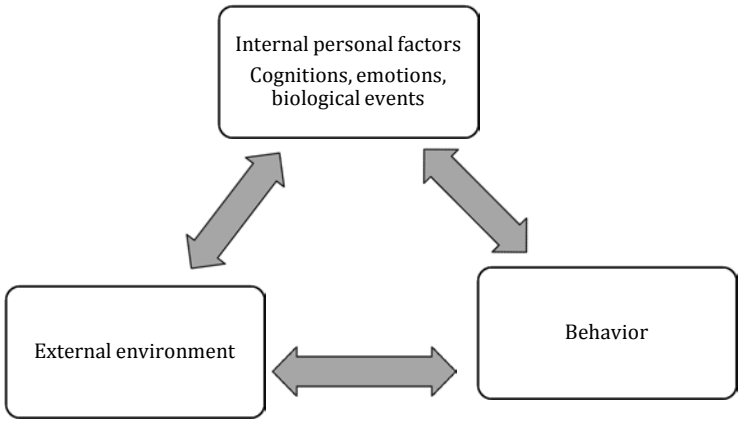

Figure 1: Bandura's model of triadic reciprocal determinism. (Bandura, 1997)

"Because of the bi-directionality of influence between behavior and environmental circumstances, people are both products and producers of their environments" (Bandura, 1989, p. 4). He also explained that individuals operate within social structures and these structures influence behaviors by constraining behavior or providing support and resources for growth. Further, perceptions and cognitive appraisals guide individuals' learning and behavioral choices. A social cognitive framework provides space for the inclusion of multiple factors that influence adjunct faculty's teaching behaviors, ranging from institutional support structures to personal perceptions of ability, and social interactions to past experiences. Nestled under the umbrella of cognitive theory, Bandura's model of self-efficacy provides the conceptual framework for the current study.

Self-Efficacy

The conceptual framework of self-efficacy provides a solid foundation for understanding adjunct faculty's experiences and perceptions as teachers. Self-efficacy is rooted in the social-cognitive theoretical approach championed by Bandura (1977) and has been identified as a key element of motivation. Self-efficacy has been used to frame an understanding of performance in

a wide variety of fields and settings including teaching and learning. Self-efficacy refers to an individual's belief in his/her ability to successfully complete a particular course of action or task. Bandura (1977) defined perceived self-efficacy as a set of beliefs that regulate an individual's functioning through cognitive, motivational, affective, and decisional processes. He posited that self-efficacy is a mastery belief that influences the goals that people set for themselves, motivation to work through obstacles, how people feel about themselves, and the degree of challenge individuals are willing to accept in a given situation. Individuals with higher efficacy beliefs will seek, engage, and persist in activities more than those with low efficacy beliefs. In professional settings, individuals with high self-efficacy beliefs show more persistence, solve problems more efficiently, and display more self-regulatory behaviors that contribute to success over equal peers with lower self-efficacy beliefs (Usher & Pajares, 2008).

Bandura discussed his conceptualization of self-efficacy hand-in-hand with another evaluative cognitive process; outcome expectancy. Outcome expectancies refer to an individual's beliefs about his or her ability to control the environment to achieve certain outcomes. Bandura clearly differentiated efficacy beliefs from outcome expectancies. In his words, "Outcome and efficacy beliefs are differentiated, because individuals can believe that a particular course of action will produce certain outcomes, but if they entertain serious doubts about whether they can perform the necessary activities, such information does not influence their behavior" (Bandura, 1977, p. 193). As an example in the context of teaching, an instructor may believe that using a range of pedagogical strategies would improve student learning outcomes; however, he may be limited in the strategies utilized due to low self-efficacy. This is an important distinction and the current study focuses on personal efficacy beliefs rather than outcome expectations. See Figure 2.

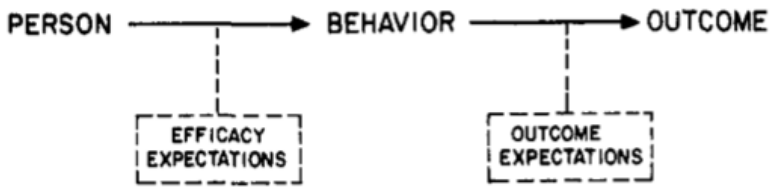

Figure 2: Relationship between elements of efficacy beliefs, efficacy expectations and outcome expectations. From Bandura (1977, p. 193).

Self-efficacy is a multidimensional and context dependent construct. It is important to note that self-efficacy beliefs focus on "…performance capabilities rather than personal qualities, such as one's physical or psychological characteristics" (Zimmerman, 2000, p. 83). Zimmerman further explained that self-efficacy involves a personal judgment about one's ability to successfully complete a task in a particular situation. This echoes the words of Tschannen-Moran et al. (1998) stating that self-efficacy involves "…self-perceptions of competence rather than actual competence" (p. 211). They argued that this is an important consideration because it is common for individuals to overestimate or underestimate actual competencies. Subsequently, self-perceptions influence behavioral choices and the amount of effort an individual is willing to expend in the completion of activities. Though the subjective nature of efficacy beliefs may be viewed as a limitation in research, the link between efficacy beliefs and motivation has been well established (Bandura, 1977; 1997). Describing how efficacy beliefs promote agency even for individuals working in difficult environments, Bandura (1997) claimed,

> Efficacious people are quick to take advantage of opportunity structures and figure out ways to circumvent institutional constraints or change them by collective action. Conversely, inefficacious people are less apt to exploit the enabling opportunities provided by the social system and are easily discouraged by institutional impediments. (p. 6)

According to the literature, encountering "institutional impediments" is a hallmark of adjunct faculty employment. To advance an understanding of the relationship between

their experiences, teaching environments, and efficacy beliefs, it is important to understand how efficacy beliefs develop.

The development of efficacy. Bandura (1977) identified four sources of self-efficacy. First, mastery experiences or performance accomplishments increase efficacy beliefs. He argued that repeated experiences of personal success are particularly powerful sources of efficacy as they validate the role of effort and agency in achieving positive outcomes. A second source of efficacy is observing the success of others, or vicarious experience. Bandura believed that seeing others demonstrate mastery increases one's beliefs in his or her personal ability to achieve similar results. Social or verbal persuasion is a third source of efficacy. For example, words of encouragement, praise for efforts, and positive feedback from supervisors, peers, and students, can promote efficacy beliefs. The fourth and final source of efficacy beliefs Bandura identified is emotional arousal. This encompasses the extent to which an individual assesses a situation as stressful, anxiety producing, or as a positive emotional experience. He explains that situations that are perceived as threatening or exceeding one's competencies increase feelings of vulnerability thereby decreasing efficacy beliefs. Conversely, experiences that facilitate positive feelings such as exhilaration and excitement can enhance efficacy beliefs.

In addition to the sources of efficacy beliefs, Bandura (1977) also identified three dimensions of efficacy beliefs that affect performance: magnitude, generality, and strength. As the difficulty or magnitude of a task increases, one's sense of efficacy may be limited to simpler versions of the task. However, others may feel confident in tackling more challenge in a given situation based on perceived efficacy. Generality refers to the transfer of efficacy beliefs from one experience to another. Among self-efficacy researchers, there is lack of agreement around the notion of generalizing efficacy beliefs beyond the specific experience. Even Bandura

struggled to clarify the balance of specific versus generalizable beliefs (Tschannen-Moran et al., 1998). This highlights the multidimensional nature of the construct reinforcing the notion that efficacy beliefs vary by domain or area of functioning. A final dimension mentioned is the strength of efficacy beliefs. Bandura claimed that stronger efficacy beliefs are associated with persistence in situations that may challenge one's sense of competence whereas those with weaker efficacy beliefs are more likely to give up when faced with difficulties that are perceived as exceeding one's abilities to negotiate the task or situation successfully.

A final key point to highlight is that Bandura explained that efficacy beliefs alone do not determine individual success, particularly when capabilities and incentives for performance are lacking. He stated, "Given appropriate skills and adequate incentives…efficacy expectations are a major determinant of people's choice of activities, how much effort they will expend, and how long they will sustain effort in dealing with stressful situations" (p. 194). An individual requires contextual supports to establish and advance efficacy beliefs.

Teaching Self-Efficacy

In the context of education, the study of teachers' self-efficacy beliefs spans a 40-year history. Based on their extensive review of the teaching efficacy literature, Tschannen-Moran et al. (1998) posited, "Teacher efficacy, as a motivational construct, proposes that level of efficacy affects the amount of effort a teacher will expend in a teaching situation and the persistence a teacher will show in the face of obstacles" (p. 213). They asserted that teachers with high efficacy beliefs have greater levels of planning and organization, are open to new ideas and teaching methods, exhibit greater enthusiasm for teaching, and demonstrate more willingness to work with students who are struggling. The authors systematically presented instruments used to measure teaching efficacy in K-12 school settings and consolidated previous findings. A final

consideration about the role of efficacy in teachers' behavior is the reinforcement loop created by beliefs. Woolfolk Hoy (2003-2004):

> One of the things that makes teachers' efficacy judgments so powerful is the cyclical nature of the process. Greater efficacy leads to greater effort and persistence, which leads to better performance (a new mastery experience), which in turn leads to greater efficacy. The reverse is also true. Lower efficacy leads to less effort and giving up easily, which leads to poor teaching outcomes, which then produce decreased efficacy. (p. 2)

The relationship between efficacy beliefs and teachers' behaviors has been well established and supported with evidence from multiple measures. In the exploration of the relationship between self-efficacy beliefs and teaching, it is important to acknowledge that two main conceptual strands have shaped the field. The first is work rooted in Rotter's locus of control construct (Gibson & Dembo, 1984). This strand emphasizes expected outcomes related to teaching. The second is derived from Bandura's social cognitive theory (1977) and focuses on judgments of personal capabilities. The current study is based on the conceptual work of Bandura. However, it is worthwhile to mention key contributions of notable research in the alternative tradition as the distinctions between the two are often murky and the research has been inexorably linked.

Gibson and Dembo (1984) was a significant contribution to the teacher efficacy literature. Drawing on both the locus of control (Rotter) and social cognitive (Bandura's) conceptualizations of teacher efficacy, they added evidence connecting teacher efficacy to instructional behaviors. In their frequently cited research, the authors sought to validate the construct of teacher efficacy and created the Teacher Efficacy Scale (TES). The authors described teaching efficacy along two dimensions. First, they explained that teaching efficacy involves self-efficacy beliefs, "…teachers' evaluation of their abilities to bring about positive student change" (p. 570). The second dimension, outcome expectancy, reflects the extent to which teachers believe "…students can be taught given such factors as family background, IQ,

and school conditions" (p. 570). It is important to note that early research in this area and construct validation was conducted in elementary and secondary school environments. Gibson and Dembo's work was conducted in three phases. First, using their 30-item Teacher Efficacy Scale, the authors surveyed 208 elementary school teachers from 30 schools. In the next phase, 55 teachers completed the Efficacy Scale and were asked to select from a list the most salient variables that contribute to students' success or failure in school. In the third phase, classroom observations of both high and low efficacy teachers (eight total) were conducted. Here, the researchers coded specific teacher instructional behaviors such as offering feedback to students, use of activities, and engagement. Measures of the two dimensions of teacher efficacy were reliable; the authors reported Cronbach's alpha of .78 for the personal teaching efficacy dimension, .75 for the dimension of teaching efficacy, and .79 for all items. Multiple procedures were also completed that demonstrated discriminant validity for items and provided evidence for the two factors. Based on their work, differences emerged in the instructional behaviors of low versus high efficacy teachers. Those high on teacher efficacy maintained an academic focus, were more likely to help students persist in failure situations, and demonstrated more flexibility in instruction than low-efficacy peers. This work was key in advancing an understanding of the dual factor structure of teacher efficacy and how teachers' efficacy beliefs influence instructional behaviors.

With their analysis of the Teacher Efficacy Scale scores of 182 prospective teachers, Woolfolk and Hoy (1990) added further evidence to the complex interaction of the two dimensions of teacher efficacy: outcome expectations and personal efficacy. Personal efficacy refers to a teacher's "…judgments of his or her personal ability to execute particular courses of action…" (p. 82). A teacher's sense of personal teaching self-efficacy is influenced by

confidence in one's ability to employ effective teaching skills, feelings of preparedness and competence, and beliefs that effort and perseverance will help in times of challenge. Teacher efficacy is a contrasting yet complementary dimension that refers to a teacher's outcome expectations about the consequences of teaching. The authors explained that an educator's sense of teacher efficacy is based on his or her beliefs that teachers can affect student learning. Individuals with a low sense of teacher efficacy doubt a teacher's ability to influence student achievement and motivation due to the overpowering influence of extraneous variables such as the student's home environment. Teachers high in teacher efficacy believe that they can play an active role in affecting student motivation and learning outcomes. Several important lessons were derived from this work. First, the relationship between these two dimensions of efficacy for teaching is complex and individuals may hold views of efficacy that seem incongruent. Second, the authors implored future researchers in this area to clearly define how and along which dimension efficacy is being measured. It is of note that not all researchers so clearly define (nor acknowledge) the dimension of efficacy measured in their studies. Further, some have alternated terminology interchangeably within the same study. This has contributed to conceptual ambiguity. In the following section, the terms used by the researcher(s) have been preserved, but highlighting the specific measures used provides insight into the researchers' conceptualization of efficacy.

The next major development in teacher efficacy research can be found in the work of Tschannen-Moran and Woolfolk Hoy (2001). With questions about the reliability and validity of previous measures and frustrated with the continued confusion about the two factor structure of the construct, Tschannen-Moran and Woolfolk Hoy developed their own measure. The authors based their work on extensive reviews of the teacher/teaching efficacy literature and reviewed

previous scales including Gibson and Dembo's TES and Bandura's own teacher self-efficacy scale. In clarifying the factors of teaching efficacy, the authors minimized the role of outcome expectancies, embracing Bandura's assertion that they play a minimal role in explaining motivation. They also sought to enhance specificity by adding items that more accurately captured the daily activities of teachers. Three studies were conducted using the new scale they created, the Ohio State Teacher Efficacy Scale (now known as the Teachers' Sense of Efficacy Scale-TSES). Both inservice and preservice teachers participated in each of the studies (Study 1: $N = 224$, Study 2: $N = 217$, Study 3: $N = 183$). Three subscales emerged from the analyses: efficacy for instruction, classroom management, and student engagement. These subscales represented a new factor structure for teaching self-efficacy. This work is significant in that it provided strong evidence for a revised understanding of the structure of teacher self-efficacy that measures beliefs about personal capabilities rather than outcomes. The importance of focusing on beliefs about capabilities to perform specific tasks in a specific context was another key development. Through understanding efficacy beliefs of teachers and the contextual supports that influence them, the authors asserted, "If the significant effects of teachers' beliefs in their capabilities were taken seriously, it could provoke significant changes in the way teachers were prepared and supported in the early years of their profession" (p. 802). They advocated for continued efforts to clarify the construct of teaching self-efficacy and understanding the relationship between context and efficacy beliefs as valuable pursuits for those studying and training teachers.

In an effort to further clarify the frequently conflated constructs of teaching self-efficacy and teacher efficacy and to more accurately capture elements of best teaching practices, Dellinger, Bobbett, Olivier, & Ellett (2008) developed the Teacher Self-Efficacy Beliefs Scale

(TEBS-Self). Their work bridged research on teaching and learning and self-efficacy theory. They argued that teaching self-efficacy measures should be modified to fit the specific teaching context and explain that although the TSES (Tschannen-Moran & Woolfolk Hoy, 2001) does reflect specific teaching behaviors, a review of best practices in teaching and learning was not conducted to select items during scale development. Three of the authors (Olivier, Bobbett, and Dellinger) conducted independent dissertation research using the newly formed TEBS-Self in K-6 elementary settings. Emergent factors from the studies included classroom management, communication, accommodation of student differences, motivation of students, and higher-order thinking skills. Findings from their studies linked teachers' sense of teaching self-efficacy to better overall school performance. This work provided a helpful clarification of the construct of teaching self-efficacy and demonstrates how scales can be developed to reflect both specific contexts and best practices.

Teaching Self-efficacy and Student Outcomes

The relationship between having a high sense of teaching self-efficacy and positive student achievement has been demonstrated in K-12 settings in a range of subjects from computer literacy to mathematics. In a study of 19 special education teachers, Allinder (1995) found those with high teaching efficacy stimulated more growth in math achievement from a sample of 38 students in grades three through six with minor learning disabilities. Efficacy beliefs were measured using Gibson and Dembo's Teacher Efficacy Scale (1984), capturing both outcome and personal efficacy beliefs. Subscale scores were combined for a composite "teaching efficacy" score that was used in the subsequent analyses. Key differences between teachers with high self-efficacy and those with lower efficacy beliefs were manifest in the goals teachers set for their students. "Teachers with higher self-efficacy set goals that were overall more ambitious than those with low teaching efficacy" (p. 252). Differences were also found in

student performance with students of high efficacy teachers. Students demonstrated better achievement in key mathematical skills when taught by teachers with high efficacy beliefs.

Ross, Hogabaom-Gray, and Hannay (2001) studied the relationship between the efficacy beliefs of computer literacy teachers and their students. Leading into their work, the authors posited "…teacher efficacy contributes to achievement because high-efficacy teachers try harder, use management strategies that stimulate student autonomy, attend more closely to low-ability students' needs, and modify students' ability perceptions" (p. 142). In an interesting extension of work in this area, the authors examined how student achievement was affected when transitioning from a classroom with a high efficacy teacher to one with lower efficacy beliefs. Efficacy beliefs were measured using an instrument created by the authors that focused on teachers' perceptions of their abilities to successfully use computers for instruction and general computer usage/skills. Approximately 400 elementary school students were tracked for 11 months. Taking into account other variables that could affect students' outcomes, the authors found that students who moved from low to high teaching efficacy teachers experienced benefits in outcomes (higher scores on computer skills tests) and in their own efficacy beliefs for computing skills.

In a departure from work exploring teaching efficacy in the context of a single subject, Caprara, Barbaranelli, Steca, and Malone (2006) created a model for the relationship between teaching self-efficacy, job satisfaction, and students' academic achievement across various academic disciplines at the level of the school. The researchers examined the aggregated final grades over the course of two years vis-à-vis the self-efficacy beliefs and job satisfaction scores of 2000 teachers in 75 junior high schools across Italy. Teaching self-efficacy beliefs were measured using an instrument derived from Tschannen-Moran & Woolfolk Hoy (2001), focusing

on beliefs about personal capabilities for select teaching behaviors. Structural equation modeling indicated an association between teaching self-efficacy beliefs and the overall performance of the school as measured by academic performance. The authors explained that teachers with high teaching self-efficacy have the ability to create professional conditions and build networks that increase job satisfaction and contribute to an overall positive learning environment. The K-12 literature in this area provides compelling evidence for the relationships between teaching self-efficacy and student outcomes. Such evidence in higher education is scarce.

Teaching in Higher Education

Before launching the review of teaching self-efficacy in higher education, an overview of the context is necessary. Understanding the research focusing on teaching in the specific context in which efficacy is to be measured provides a vital link between theory and practice (Dellinger et al., 2008). The literature on college faculty teaching is more limited in scope and size than that for pre-college educators. Kezar and Maxey (2014b) succinctly argued,

> In K-12 education, teachers are typically regarded as central to student learning and success. As a result, teacher education programs, standards and certification for teachers, as well as teachers' professional development receive a great deal of attention and support from policy makers. It is fully accepted that teachers matter to student learning. For whatever reason, the same assumptions are not always made in higher education. (p. 29)

Morris and Usher (2011) observed that attention to teaching in higher education is overall lacking and further argue that the instructional training of faculty is "underemphasized" (p. 232). They also blamed the absence of state and national mandates for providing preparation in pedagogical skills as one of the key factors that has permitted inconsistencies in the quality of instruction to persist. In addition, the culture of college teaching is vastly different than in K-12 settings. There is less collaboration and more individualism. Shulman (1993) discussed the isolation that has traditionally characterized college teaching. He observed, "We close the

classroom door and experience pedagogical solitude" (p. 6). He proposed bringing attention to the importance of metaphorically opening the doors of classrooms, encouraging the exchange of ideas among faculty colleagues, and changing the status of teaching in higher education from "private to community property" (p. 6). Members of the higher education community could make progress toward this goal by examining faculty's instructional/teacher beliefs and sharing practices associated with high quality instruction.

Though narrow, the work in this area does convey consistent messages about what constitutes quality teaching in higher education. Roueche, Roueche, and Milliron (2003) are among the most prolific researchers of community college teaching. Over the course of five years, they collected data about characteristics of high quality teaching from community college faculty through focus groups, questionnaires, and interviews. "The importance of understanding the community college student population and preparing to teach well in this context" was a frequently expressed theme echoed by many of the participants (p. 36). Community college students are a diverse population and high quality teachers take the time to learn about the students, their backgrounds, and their needs as learners. Having high expectations for students and teaching not merely for content, but for deep learning were also identified as key beliefs for high quality instructors. Advice for teaching included assembling a wide range of instructional skills could be applied in multiple contexts and with a variety of learners. It is not enough to have the tools, the authors explain, excellent instructors must be willing to be flexible and persistent in finding the best instructional tool for the given situation. Mastery of subject matter, organization, and actively involving students in the learning process were also strongly encouraged. Coming to "understand the art of instruction" was viewed as a journey that must be travelled with purpose and effort (p. 38).

Bain (2004) studied outstanding professors at 24 institutions to capture what made them great teachers. He defined teaching excellence as achieving "…remarkable success in helping their students learn in ways that made a sustained, substantial, and positive influence on how those students think, act, and feel" (p. 5). Through interviews, observations, conversations with students, and analysis of documents ranging from syllabi to examples of student work, Bain postulated that outstanding college teachers have commonalities in several key areas. First, they are experts with depth of knowledge in their subjects. Next, they thoughtfully design pedagogical activities keeping student learning objectives in mind. Third, they have high expectations for their students. Outstanding professors create "…challenging yet supportive environments in which learners feel a sense of control over their education; work collaboratively with others; believe their work will be considered fairly and honestly; and try, fail, and receive feedback…" (p. 18). They also treat their students with respect, and design assessments of student learning that focus on learning objectives and evolve according to students' needs. Reflecting on his research and personal experiences with faculty who were excellent teachers, Bain implored faculty to reflect on their teaching and use both the theoretical and research literature in the areas of teaching and learning at each stage of a course from planning, to implementation, and assessment.

In their comprehensive work focusing on college students' development Pascarella and Terenzini (2005) identified key behaviors of effective teachers that facilitate successful student learning experiences. According to volumes of research summarized by authors, students' classroom experiences are enhanced when college teachers: (a) are knowledgeable in their subject, (b) have the ability to clearly explain difficult concepts, (c) maintain organization and structure, (d) employ effective pedagogical skills such as the use of examples to illustrate

important points and connections between concepts, (e) have concise and direct communication, and (f) establish rapport with students by welcoming questions, discussions, and interactions outside of the classroom. Their summary adds evidence to a consistent message about quality teaching in higher education that creates optimal learning environments for students.

As a final study in this vein, using student evaluation ratings of 28 specific instructional dimensions, Feldman (1997/1996) identified the behaviors of exemplary teachers by reviewing the results of three previous meta-analyses. The highest correlations were preparation and course organization with clarity and understandability second highest. Meeting course objectives, perceived impact of instruction i.e. students belief that they learned something in the course, and stimulation of interest in subject matter rounded out the top five instructional domains.

Can good teaching in higher education be taught and how is subsequent student performance affected? Rutz et al. (2012) demonstrated the relationship between faculty participation in professional development focusing on teaching skills and student academic performance. To test the assumption that "…when faculty learn more about teaching, they teach better," the authors collected comprehensive evidence of faculty teaching including interviews, observations, focus groups, surveys, analysis of course documents and review of students' work from faculty at two four-year institutions who attended professional development sessions focusing on "good pedagogical practices" (p. 41). Findings showed that teaching strategies improved and improvement of student work was noted on one of the campuses as evidenced by scores on critical-thinking assessments. It is of note that of all faculty participants, adjunct faculty were the most likely to have actively sought and attended professional development sessions focusing on teaching.

To summarize, quality teaching in higher education that is linked to successful student learning requires more than content knowledge, it requires pedagogical knowledge. It requires the ability to plan and organize pedagogical activities, knowledge of assessment strategies, flexibility, effective communication, the ability to facilitate critical thinking and deep learning, and establish a positive learning environment. Active and critical reflection of one's teaching and beliefs are also essential elements of high-quality teachers in any educational environment, including higher education (Brookfield, 2015). Table 1 shows a side-by-side comparison of findings from selected studies identifying key features of quality teaching in higher education.

Table 1

Summary of Elements of Quality Teaching from Selected Studies

Area of Teaching	Pascarella & Terenzini (2005)	Bain (2004)	Roueche, Roueche, & Milliron (2003)	Feldman (1996)
	Content knowledge	Content knowledge	Master content knowledge	Perceived impact of instruction
	Use of effective pedagogical strategies	Change pedagogical activities based on students' needs	Flexibility in using multiple instructional skills	Meeting course objectives
Effective instructional skills	Maintain organization and structure		Organization	Preparation and organization
	Ability to explain difficult concepts	Facilitate deep learning (over surface learning)	Monitor learning progress	Clarity and understandability
			Foster "hardier" learners; teach for learning, not merely for content	
		Fair assessment of student learning		Quality and frequency of feedback
		Make changes to assessment practices based on needs	High expectations for students	
Creating a positive learning environment	Establish rapport/positive relationships	Engage in interactive communication with students	Knowledge of students and their learning needs	Availability and helpfulness
	Concise and direct communication	Treat students with respect	Respect for students, demonstrate care and empathy	Stimulation of student interest

Teaching Self-Efficacy in Higher Education

As evidence of recent progress toward the goal of increasing faculty reflection on their teaching, researchers have begun to explore teaching self-efficacy in higher education, but there is considerably less research measuring teaching efficacy in higher education than in the K-12

literature. Among the first to break ground in this area, Chang, Lin, and Song (2006) developed the Faculty Teaching Self-Efficacy scale (FTSE) to measure "…college teachers' belief in their own capacities for teaching" (p. 3). Their study of 100 full-time faculty from public and private schools in Taiwan revealed several dimensions by which efficacy scores differ including experience, institution type, academic department, expertise, and training. Using self-developed instrument, efficacy was assessed in the areas of content, pedagogy, interaction, technology, support, and assessment. The researchers found that instructors' assessments of their efficacy in the various aspects of college teaching corresponded with students' evaluations of their teaching. Overall, faculty in the study expressed higher efficacy for mastery of content and held lower efficacy beliefs in their instructional skills. Significant differences in perceived efficacy were also noted based on gender and discipline. Female professors had higher efficacy scores in interaction with students and assessment than males. Professors of education had the highest overall efficacy scores while science faculty reported lower scores, particularly in the areas of interaction and support.

Prieto Navarro (2005) also created an instrument to measure faculty's teaching self-efficacy: The College Teaching Self-Efficacy Scale. The development of this instrument is described in her book, *Autoeficacia del Professor Universitario: Eficacia Percibidi y Practica Docente* (2007). The entire book was not available in English; however, the 2005 synthesis of her study was translated from Spanish to English and the prologue of her book, written by giants in the field of educational psychology, Albert Bandura and Frank Pajares, was also referenced. In this prologue, Prieto Navarro's work was lauded:

> In too many cases, problems related to the assessment of teacher's sense of efficacy have impeded research in this area of study. Professor Prieto Navarro has successfully rectified these problems by constructing an instrument with strong psychometric properties that is also faithful to the tenets of social cognitive theory.… Her findings not

> only provide an important contribution to the literature on teacher's self-efficacy beliefs but extend this literature to the realm of higher education. (p. 14)

The CTSES was developed with the goals of evaluating the self-efficacy beliefs in various aspects of teaching and faculty's use of different teaching strategies in relation to those beliefs. The reliability coefficient of the CTSES in this study was $\alpha = .94$. Based on her study of university faculty in Spain, teaching experience was the highest predictor of teaching self-efficacy beliefs. Teaching self-efficacy scores varied between teaching strategies, meaning that faculty rated their efficacy beliefs higher for some teaching tasks over others. Findings also suggested that there was a clear relationship between teaching self-efficacy beliefs and the degree to which teachers report using particular strategies. Pedagogical training also emerged as an important predictor of teaching self-efficacy beliefs. Faculty with backgrounds in education or specific training in teaching had higher teaching self-efficacy beliefs. In addition, data obtained from the survey indicated that faculty who lacked training in the assessment of student learning reported limitations in the strategies they were able to implement. Prieto Navarro's work represents a significant contribution to the literature by providing insight into the sources of teaching self-efficacy beliefs of faculty and connecting teaching self-efficacy beliefs to instructional practices in higher education.

With extensive research experience in the area teacher beliefs, Fives and Looney (2009) also worked to extend teaching self-efficacy research into higher education. They explained that although the role of teachers at the college level is different from that of those in elementary and secondary settings, the fundamental purpose of higher education is to "…help learners in various fields to develop meaningful understandings about their domains of study and to facilitate the development of critical thinking within and among domains" (p. 182). Their work adds support to the bridge linking between elementary/secondary teaching efficacy research and similar

research in higher education. The instruments used in this study were an adaptation of the Teacher Sense of Efficacy Scale (Tschannen-Moran & Woolfolk Hoy, 2001), designed for use with elementary and secondary teachers, and Goddard's (2000) collective efficacy scale. In a study of 117 college instructors (75 graduate students, 24 non-tenured faculty, and 18 tenured faculty), at a large U.S. research university, Fives and Looney found no significant differences in teacher efficacy or collective efficacy based on position/faculty rank in the areas of efficacy for student engagement, instructional practices, classroom management, and overall teacher efficacy. The authors hypothesized that the lack of statistically significant differences among faculty teaching positions could be attributable to a few key factors. First, they explained that the selection process for participation in the study was voluntary and faculty with lower efficacy beliefs might have been less likely to participate. Next, they highlighted the research orientation of the institution where teaching is viewed as having a "secondary role" as a possible factor and suggest that future research should be conducted within institutions with a teaching focus (p. 187). The authors also questioned the appropriateness of using TSES to measure teaching efficacy with college faculty due to differences the educational culture of higher education in comparison to K-12 settings for which the instrument was designed.

Although the limitations of their work were noted, Fives and Looney (2009) offered additional insights into faculty teaching self-efficacy. Consistent with the findings from Chang and colleagues (2006), differences in efficacy were found along department and gender lines. Instructors in the School of Education reported higher efficacy scores than instructors in behavioral and social sciences, and females reported higher efficacy than males. A final point of interest from the study is the authors' discussion of the possible role of departmental support and collegiality as influences on efficacy beliefs. They explained that the socialization, sense of

professionalism, and sense of collegiality may facilitate "…common expectations for teaching and the ability to teach" (p. 188). Their work highlights key considerations for research focusing on college teachers' beliefs.

In line with the previous studies, Mehdinezhad (2012) also explored faculty members' teaching efficacy. The author proposed the following areas and skills in which competent teachers are proficient: subject matter/content knowledge, effective communication, evaluation of learning/assessment, creating a positive learning environment, and use of technology. Based on his survey of 300 faculty sampled from four state universities in Iran using a variation of the FTSE (Chang, Lin, & Song, 2006; 2011), Mehdinezhad found that efficacy scores differed based on department; faculty members in education scored higher overall and on efficacy for curriculum/instruction, assessment, and creating a positive learning environment than counterparts in engineering, technical fields, and humanities. Efficacy scores also differed by experience in specific areas; assessment efficacy scores were higher among faculty with more years of teaching, and by faculty rank. Assistant professors ranked their efficacy for creating a positive learning environment higher than associate and tenured faculty. The author hypothesized that this is due to faculty at lower ranks primary focus on teaching rather than research and publication that is typical of the Iranian institutions in his sample. Although this study was conducted on a limited sample of full-time faculty, it provides evidence of differences in teaching self-efficacy beliefs in relation to academic department, experience, and faculty rank.

Morris and Usher (2011) added to the literature in this area by qualitatively exploring the development of teaching self-efficacy among high-quality professors. The authors interviewed 12 award-winning full-time professors from five different research-intensive universities with the goal of learning more about factors that contributed to their teaching efficacy. Each of the

participants had received multiple teaching awards from their institutions and other sources. Mastery experiences i.e. building a body of successful teaching was identified as a key contributor to high efficacy beliefs. These findings are consistent with Prieto Navarro (2005). Student feedback and observing others' high quality teaching were also identified as influential sources of efficacy. A finding of particular interest is that professors indicated that while content knowledge in their discipline was important to their sense of efficacy, knowledge in pedagogical strategies and techniques was also vital. One of the professors stated, "there's this bridge between mastering the content and being able to *teach* the content" (p. 239). Successful professors indicated that they gained pedagogical knowledge through both experience and involvement in groups/committees in which they engaged in discussions of teaching, sharing experiences and best practices. The authors summarized the importance of expanding work in this area saying self-efficacy research "…can provide clues as to how professional learning experiences may enhance the confidence and competence of teachers in higher education" (p. 244). This work provides further evidence of the importance of providing support and training for the development of pedagogical skills and knowledge among faculty.

Graduate Student Teaching Self-Efficacy

Reviewing the teaching self-efficacy in higher education literature, the area most closely aligned with the current proposed study of adjunct faculty focuses on graduate student teaching assistants. Johnson and McCarthy (2000) grouped adjunct faculty and teaching assistants together as "casual labor" in higher education that are paid substantially less than full-time faculty, not integrated into the institution, and have no long term commitments. Graduate teaching assistants (GTAs) often provide instruction for undergraduate students and as with adjunct faculty, they receive little training and minimal support in improving their teaching (DeChenne & Enochs, 2010).

Prieto and Altmaier (1994) provided an example of GTA efficacy research. Basing their work on the theoretical conception that self-efficacy is a "mediating variable in teacher effectiveness," Prieto and Altmaier explored factors related to self-efficacy among graduate teaching assistants (p. 493). Graduate teaching assistants at a large research university (n = 78) were surveyed using an adapted version of the Self Efficacy Toward Teaching Inventory (SETI). GTAs with previous teaching experience and with training were found to have higher levels of self-efficacy than those with no prior teaching experience and without training. Aspirations to become a teacher also correlated with efficacy beliefs. This demonstrates that efficacy beliefs can be influenced by future plans. Along with this, evidence from this study highlights the need for pedagogical training as a key element in increasing teaching self-efficacy beliefs and further bolsters the case for learning more about efficacy beliefs of educators at every rank.

DeChenne et al. (2012) measured teaching self-efficacy among graduate teaching assistants in STEM (science, technology, engineering, and math). They advocated for the exploration of self-efficacy to help in predicting teaching behavior, student achievement, and to assess growth and development as an instructor. An adapted version of the CTSES was used to measure self-efficacy with demographic items added specifically for STEM GTAs. A total of 253 GTAs from six universities across the U.S. participated in the study. Exploratory factor analysis was performed followed by a second-order confirmatory factor analysis. Two clear factors, labeled by the authors as (a) instructional efficacy – related to activities needed to prepare and teach a class and (b) learning efficacy – reflecting pedagogical strategies that promote and active and engaging learning environment, emerged from the data. Subsequent second-order confirmatory factor analysis showed that the two-factor structure was a good fit for the data (NNFI = .92, CFI = .93, RMSEA = .04). The authors asserted the instrument was

appropriate for use in measuring overall teaching self-efficacy in addition to the learning and instructional subscale efficacies. Teaching self-efficacy did not differ significantly by gender, career plans, college, or instructional role. Teaching experience was positively correlated with instructional skills but not learning environment. The authors also measured the relationship between professional development activities and self-efficacy, noting that their findings indicate that good professional development improves teaching self-efficacy. DeChenne and colleagues posited that teaching self-efficacy was overall high but that continued efforts to design and implement professional development programs focusing on teaching and students learning are necessary for this population.

Adjunct Faculty's Teaching Self-Efficacy

Throughout the current search, research focusing on adjunct faculty's teaching self-efficacy was notably scant. However, it has emerged as a construct of importance in linking how their working conditions influence their instruction. In a phenomenological study of community college adjunct faculty, doubts about teaching self-efficacy emerged as a theme (Christensen, 2012). Based on interviews with seven adjunct faculty, Christensen discovered that they questioned their competency as teachers. Adjunct faculty in the study reported experiencing apprehension and fear early in their teaching careers. They identified lack of support as problematic. One adjunct faculty expressed doubts in his competency to teach the content of the course he was assigned to teach. Confusion and lack of knowledge about the process of designing a course and creating assignments was also identified as an area of insecurity. Adjunct faculty in the study expressed a desire to become better teachers but had difficulties in getting reliable feedback about their teaching. Findings from the study also included a description of ways faculty increased their sense of teaching self-efficacy. In the absence of institutional supports, adjunct faculty used "trial and error and self-reflection" to improve their teaching (p.

77). They developed individual strategies such as reviewing videos of their teaching, statistical analysis of student performance to gauge performance and effectiveness. This work demonstrates that adjunct faculty care about feeling efficacious about their ability to teach and are willing to make efforts to improve their teaching self-efficacy beliefs and teaching performance.

The current study moved beyond previous studies by directly exploring adjunct faculty's teaching self-efficacy beliefs using mixed methods. Adjunct faculty are responsible for providing over half of the instruction in higher education yet they are an understudied population. Much is known about adjunct faculty's working conditions but there is a gaping hole in understanding this population as educators. To date, no other study that focused exclusively on adjunct faculty's teaching self-efficacy was found in the related literature. There is a strong body of evidence in the K-12 literature linking teaching self-efficacy beliefs to instructional behaviors, effort, persistence, and subsequent student outcomes. Recent efforts to establish similar evidence in higher education represent progress in highlighting the importance of the role of faculty's teaching self-efficacy beliefs, yet also draw attention to the need for additional research (e.g. Prieto Navarro, 2005-2007; Chang, Lin, & Song, 2006/2011; Fives & Looney, 2009; Morris & Usher, 2011). Extending work in this vein to an understudied population of educators, the new faculty majority of adjunct instructors, offers a new contribution to both the educational psychology and higher education bodies of knowledge. This was achieved though advancing an understanding of adjunct faculty as educators and providing insights into the personal and contextual variables that influence their perceptions of competence in delivering effective instruction. Findings from the current study provide evidence that will help colleges to develop professional development policies and practices for the majority of those behind the

wheel of driving student learning in higher education. This will promote adjunct faculty's instructional effectiveness and integration into the institution, students' learning, increased retention, and overall institutional effectiveness.

Chapter Three: Methods

The purpose of this study was to explore teaching self-efficacy among adjunct faculty at a single institution to gain insight into their beliefs as teachers. Learning more about the teaching beliefs of this population of educators and how contextual factors influence those beliefs will help colleges to plan and implement supportive practices and polices. This is a critical step in promoting effective teaching practices that lead to successful student outcomes and promote the teaching mission of higher education institutions. Perceptions of efficacy for specific teaching behaviors in a specified context were measured. Adjunct faculty were also asked to identify challenges and supports that influence their efficacy beliefs. All documents and methods described in this section were reviewed and approved by the institutional review boards at the researcher's institution and the College studied.

Research Questions

The following research questions guided the study:

1) How do adjunct faculty perceive their teaching self-efficacy in the areas of instructional skills and creating a positive learning environment?

2) Do levels of teaching self-efficacy differ by demographic variables and teaching appointment?

3) What is the relationship between teaching-related support services provided by the College and adjunct faculty's teaching self-efficacy?

4) What do adjunct faculty identify as sources, supports, and challenges that influence their teaching self-efficacy?

5) In what ways do interviews with adjunct faculty explain selected data from the surveys?

Research Design

The study was set at a single institution with a teaching focus. An explanatory sequential mixed-methods research design was used (Creswell & Plano Clark, 2011). There were two phases of data collection; quantitative data collected via survey, a modified version of the College Teaching Self-Efficacy Scale – CTSES (Prieto Navarro, 2006), followed by interviews with adjunct faculty to explain and elaborate on quantitative findings. Both forms of data had equal priority. Figure 3 shows the design.

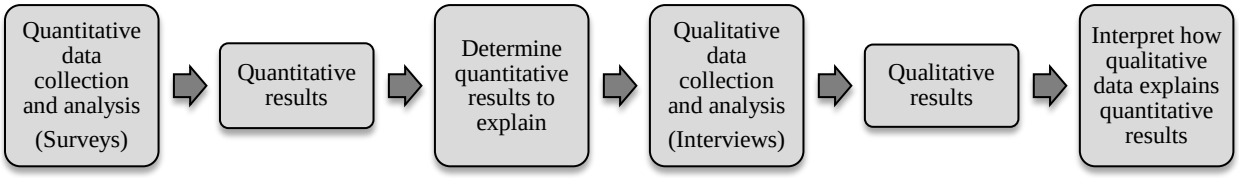

Figure 3: Research design of the study. Explanatory sequential mixed methods design.

Describing the benefits of mixed research, Johnson, Onwuegbuzie, & Turner (2007) posited, "It recognizes the importance of traditional quantitative and qualitative research but also offers a powerful third paradigm choice that often will provide the most informative, complete, balanced, and useful research results" (p.129). With this in mind, the mixed methods design and single institution setting were selected for the current study for several additional reasons. First, teaching self-efficacy beliefs vary by context and skill (Bandura, 1997; Prieto Navarro, 2005; Dellinger et al., 2008). For example, one may be highly efficacious in conveying information to students but have lower confidence in the ability to assess student learning. Recognizing this plays an important role in the proposed design. Adjunct faculty's experiences also vary significantly by context (Kezar, 2013). A mixed methods approach facilitated a rich in-depth understanding of adjunct faculty's experiences and beliefs within a bounded unit. Second,

previous research in this area has demonstrated differences in teaching self-efficacy beliefs among faculty, but failed to adequately explain those differences (e.g. Fives & Looney, 2009; Chang et al., 2006). The current study used a modified version of a reliable survey instrument to gain a broad overview of teaching self-efficacy beliefs in a large population followed by interviews to explain findings thereby adding depth and meaning to the quantitative data. Third, the pragmatism-of-the-middle philosophical orientation that guided the planning of the current study reflects a realistic view of the construction of knowledge and allows for multiple methods to solve problems in an applied setting (Creswell & Plano Clark, 2011; Frels & Onwuegbuzie, 2013).

A mixed methods design was chosen with purpose and with a clear understanding of challenges characteristic of this type of research. Creswell and Plano Clark (2011) explained that mixed methods research takes extra time and there is a degree of uncertainty in the preliminary study design as decisions that guide the second phase of data collection can only be made after the first phase is complete. As an example, research question number five, "In what ways do interviews with adjunct faculty explain selected data from the surveys?" was intentionally broad reflecting the emergent approach of the explanatory sequential design. This question is a typical example of what Creswell and Plano Clark identify as a "method-focused mixed methods research question" (p. 164). It highlighted the methodology that would be used to form an overall interpretation of adjunct faculty's teaching self-efficacy beliefs when specific content was not yet apparent. In this chapter, both phases of data collection and how the data were mixed will be explained. A preview of selected results has been included in this chapter when necessary to explain the researcher's decision-making process.

Study Setting

The current study was conducted at Mid-Atlantic Community College (MACC is a pseudonym), a large two-year community college. According to the Carnegie Foundation classification system, the institution is classified as a Basic-Associate's, public, suburban-serving multicampus institution. There are two main campuses and a nursing education center located on the grounds of a local hospital. The student body of this institution is diverse. Based on the 2016 annual report for the institution, total student enrollment is 14,135. Eighty-five percent of students are part-time and 15% are full time. By gender, approximately 58% are female and 42% are male. The majority of students are White (59%), followed by African-American (25%), and Hispanic (7%). Asian, American Native, two or more races, and race not specified account for approximately 5% of the student body. A diverse span of ages is represented with most in the following ranges: ages 18-19, 23% and ages 20-29, 39%. Students aged 17 and under comprise 18% of the student body (dual enrollment). Eighteen percent of the students are over the age of 30.

Approximately 460 adjunct faculty were actively teaching at MACC in 2016. In comparison, there were approximately 115 full-time faculty. In fall 2014, 65.5% of classes offered at the college were taught by adjunct faculty and in spring 2015, the proportion jumped to 78.9%. Fifty-eight percent of adjunct faculty are female, 42% are male. The racial/ethnic composition of the adjunct population at MACC is 79% White, 15% Black, and 6% is comprised of Asian American, American Native, and Hispanic. Classes and programs of study are grouped into three academic divisions. Thirty-four percent of adjunct instructors teach in the Arts, Humanities, and Social Sciences (AHSS) division; 25% teach in the Math, Natural, and Health Sciences (MNHS) division, and 17% teach in the Engineering, Business, and Public Services (EBPS) division. Seventy percent of MACC adjunct faculty's highest degree is Masters, 17%

Doctoral, and 12% Bachelors.

MACC has several policies and procedures in place that are designed to support adjunct faculty's teaching effectiveness including a yearly meeting for all instructors i.e. convocation, formal mentoring relationships with a more experienced full-time faculty for new adjunct faculty, a comprehensive adjunct faculty evaluation process, and a variety of trainings and workshops. This made MACC an ideal institution for the current study. Exploring adjunct faculty's experiences at this institution provided insights about the relationship between contextual variables and teaching self-efficacy beliefs.

Instrumentation - Survey

Adjunct faculty's teaching self-efficacy was measured using a modified version of the College Teaching Self-Efficacy Scale - CTSES (Prieto Navarro, 2006). See Appendix A for the modified version of the CTSES used in the current study. After a review of the relevant literature and careful study of Bandura's guide for creating self-efficacy scales (2006), this instrument was selected for several reasons. First, it was designed specifically for use with college faculty. Second, the items reflect each of the areas of high quality college teaching identified in Table 1. Third, the instrument's reliability score (Cronbach's $\alpha = .94$) indicates that it consistently measures faculty's teaching self-efficacy. Field (2009) notes that Cronbach's alpha values between .7 and .8 are generally acceptable in determining if a scale is reliable. Alpha values below the acceptable cutoff levels indicate that the risk of measurement error, or inconsistency in measuring the intended construct, is high. With an alpha of .94, it can be determined with relative certainty that this is a highly reliable instrument and the likelihood of

measurement error is low. Next, the instrument focuses on specific instructional behaviors rather than student outcomes and the items on the scale are comparable with those on other well-validated measures of teaching self-efficacy (e.g. Tschannen-Moran & Woolfolk Hoy, 2001). The CTSES captures the conceptualization of teaching self-efficacy, i.e. beliefs in one's capabilities to perform specific teaching and learning related tasks in a particular context, this study was designed to explore. Two other instruments were considered for use in the current study. The first alternative considered was the Faculty Teaching Self-Efficacy Scale (Chang et al., 2006). A side-by-side comparison showed that both instruments were comparable and shared common items. The wording of items in the CTSES was clearer and fewer revisions/modifications were needed for use in the current study. Second, the adaptation of the TSES used by Fives and Looney (2009) was considered. This instrument did not capture the specific teaching behaviors of higher education faculty. This was a stated limitation of their study. With items designed to capture elements of teaching in higher education (as shown in Table 1), high reliability, and clear wording, the CTSES represented the best fit for the current study.

The CTSES was modified for use in this study. The original instrument is long (95 items) divided into two sections. In the first section, dual measures were used for 44 of the items that target specific higher education teaching tasks; one on the left with a set of likert-type items focusing on self-efficacy beliefs (How confident am I in my ability to accomplish the stated activities), the other, on the right side of the instrument, a set of likert-type items measuring frequency of behaviors (Indicate how often you carry out the stated activities), for a total of 88 required responses. Only the self-efficacy beliefs scale was retained in the current study. This is consistent with DeChenne et al. (2012). Also, the seven items targeting attitudes toward

teaching, demographics, and outcome expectancies in the second section of the original survey were replaced with five questions that target adjunct faculty's experiences with teaching related support services at MACC. DeChenne and colleagues (2012) found two pairs of redundant items and removed one from each pair; consistent with their revision, two redundant items were removed from the survey. They also deleted items focusing on course design and those with pedagogical language they believed did not reflect GTA's level of experience or teaching responsibilities. These items were retained in the current study, but two additional questions not applicable to the current context were deleted. "Modify and adapt your syllabus if your students' needs require it" was also deleted due to redundancy with another item. Demographic information was also collected and participants were asked to answer three open-ended questions that focused on institutional experiences that have influenced their teaching self-efficacy beliefs. The total number of items in the modified version of the CTSES used in this study was 57.

Survey Content Review

Several steps were taken to ensure that the survey accurately captured the multiple elements of teaching in higher education appropriate for the MACC context. First, three adjunct instructors not employed by MACC were asked to offer feedback about the survey questions to ensure that the questions were easy to interpret, relevant, and valid. The instructors indicated that they believed the questions were appropriate and did not suggest any revisions. Additionally, three full-time faculty in each of the different academic divisions at MACC were asked to review the survey with the directive, "Please review to ensure it captures the essential elements of teaching at MACC and offer feedback." Each affirmed that the instrument effectively addressed relevant aspects of teaching at the College.

Pilot Study

Following content review of the instrument, a pilot administration was conducted. The survey was piloted with a sample of adjunct faculty from a similar, sister institution of MACC. After the survey and research plan was approved by the pilot institution's IRB, an administrator at the site emailed the survey to three academic deans with instructions to share the survey with adjunct faculty in their divisions. The survey link was embedded in an email to adjunct faculty that described the purpose of the pilot study and explained that participation was voluntary. One open-ended question was added to allow adjunct faculty to offer feedback about the survey. Twenty-four adjunct faculty completed the pilot survey. Based on the pilot data, the modified CTSES was reliable ($\alpha = .93$) which was nearly the same as the initial reliability ($\alpha = .94$) reported for the instrument (Prieto-Navarro, 2005). Item-level analysis also indicated there was sufficient variability present in the responses (ranging from 1 = Not at all confident to 6= Completely confident) on efficacy items to justify moving ahead with the instrument. Open-ended feedback from the pilot participants indicated that the survey was easy to use and was "well-designed." Given the positive feedback from the panel of adjunct faculty, full-time faculty at MACC, and from the pilot administration, no significant revisions were made to the survey.

Data Collection and Analyses

Quantitative Data Collection: Surveys

Survey recruitment. Reviewing publically available data from Survey Monkey based on prior research projects conducted at MACC revealed that expected response rates for online survey administration at this institution was approximately 20%. Therefore, careful attention to timing and recruitment efforts were believed to be critical in boosting response rates for this study. By collaborating with MACC administrators, the researcher was allotted time to address

adjunct faculty at their once yearly required meeting, convocation. This is the only time of year that adjunct faculty all meet together in person with others from their academic departments and it represented the best opportunity to personally introduce the research opportunity to the maximum number of potential participants. The researcher briefly described the study at the general session of the convocation with an audience of over 200 full and part-time faculty in attendance. Also, an informational flyer was placed in the packet that each adjunct received at the session. The link to the survey was emailed to adjunct faculty the day following convocation.

Survey administration. The survey was launched in the fall of 2016. Due to the nature of this population (limited time on campus, spread out among departments, etc.) online administration was chosen in hopes of yielding the highest response rates. Timing was also critical, and the survey was launched the day after in-person recruiting efforts during adjunct convocation. Dillman's tailored design model (2007) was used to guide administration processes to maximize response rates. The survey was created and administered using the online program Survey Monkey following best practices; for example, simple, consistent numbering of items, presenting only a few items (five) per page, and using a visual progress bar. Administration included an email with the survey link, and two follow-up reminder emails. The survey remained open for three weeks. Emails were sent from the MACC Office of Institutional Effectiveness. The researcher did not have access to adjunct instructors' emails or identifying information at this point in the study. All adjunct faculty at MACC received the survey. Upon opening the survey link, participants read a statement of informed consent. Participants were required to check a box to affirm willingness to participate before the survey would open. To protect participant confidentiality, no identifying information was tied to the survey responses.

As an incentive, upon completion of the survey, participants were given the option to enter an email address for the chance to win a $10 Amazon.com gift card. Research by Clarkberg and Einarson (2008) on incentives for survey participation showed that rewards distributed to participants at fixed intervals concurrent with administration increased response rates above a single drawing for the incentive(s) at the close of the survey. Based on this research, every fifteenth survey participant received a gift card via email for participating. To be eligible, participants were redirected to a separate Survey Monkey survey to submit an email. This required only an email address, no name, and was optional. The email address was not connected to the survey data. The number of participants who shared an email address was reviewed daily and gift cards were immediately emailed to every 15th participant. A total of seven $10 gift cards were emailed.

Survey participant characteristics. One hundred and sixty-six adjunct instructors responded to the survey. This represented a response rate of 36%. Of the responses received, seven participants abandoned the survey early and one of these seven also identified as a full-time faculty. These cases were excluded. Analyses were based on the remaining 159 responses. After the data were cleaned and labeled, descriptive analyses were conducted. Next, data were checked to ensure that assumptions for performing appropriate analyses were met using descriptives and visual inspection of histograms (i.e. normality, homogeneity of variances, absence of outliers, and absence of multicollinearity) (Field, 2009).

Adjunct faculty survey participants represented a range of years of teaching experience from the first semester in the classroom to 46 years. The average years of teaching in higher education was (M = 9.90, SD = 9.00), with three years experience the most frequently reported. Overall, this was an experienced group of educators. Respondents were asked to select options

that described them as adjunct faculty (more than one could be selected) and 39% taught part time in addition to a full time job, 38% indicated an aspiration to be full-time faculty, 25% taught part-time to accommodate other life commitments, 20% taught part-time at multiple institutions, 14% were retired from full time work, and 9% identified other reasons for adjunct work including health issues, multiple part-time jobs, and teaching for the enjoyment of it. Of all of respondents, 42% had attended teaching workshops or trainings, 34% had a degree in teaching or education, 29% had informal teaching experience, and 17% reported "Other" teaching-related experiences including extensive experience teaching in elementary, middle, and high schools, military teacher training courses, and graduate school teaching assistantships. Only 18 (11%) indicated they had no formal training in teaching.

The sample was representative of the population of adjunct faculty at MACC in gender, race/ethnicity, highest degree, and academic division. More females than males completed the survey, and the majority of respondents were White, held Master's degrees, and taught in the classroom at MACC (face-to-face rather than online or hybrid). Survey participants represented each of the three academic divisions in the College. Three academic division categories were created by grouping the 15 academic subjects identified on the survey into their divisions as defined by the College. For a listing of number of participants in each of the academic subjects, see Table B1 in Appendix B. See Table 2 for a summary of survey participants' demographics.

Table 2

Demographics of Survey Participants

Source	Level	Frequencies	Percentages
Gender	Female	92	61%
	Male	55	37%
Race/Ethnicity	White	117	75%
	African-American	18	11.5%
	Prefer not to answer	14	9%
	Hispanic/Asian/Multiple	8	5%
Degree	Masters	105	67%
	Doctoral	32	20%
	Bachelors	11	11%
	Other	9	6%
Academic Division	Arts, Humanities, Social Sciences	69	43%
	Math, Natural, Health Sciences	51	28%
	Engineering, Business, Public Services	24	15%
	Other	14	9%
Teaching Format	Classroom	112	70%
	Online	34	21%
	Hybrid	12	7%
	Dual Enrollment	3	2%

Preliminary Analysis – Instrumentation

All statistical analyses were conducted using SPSS version 24 statistical software. First, missing data analysis was conducted. Eight cases had missing data; six were missing one response, two were missing five responses. The two cases with five missing data points were visually inspected for anomalies. Both neglected to answer the questions on the last page of the survey. In each of these cases, as the percentage of data missing was only 15%, and this did not represent a significant percentage of the overall data, the cases were retained. Some missing data is not uncommon in educational research and it was decided to use pairwise deletion throughout the analyses to retain as much of the data as possible (Peugh & Enders, 2004). According to Cohen, Cohen, West, and Aiken (2003), "…the best scientific solution is to keep the missing data to a minimum and to get as much information about the reasons that data are missing as possible" (p. 450). Reliability analysis was conducted inclusive of all 39 items measuring efficacy on the instrument ($\alpha = .97$) indicating that the instrument was reliable.

Next, the variables were reviewed to ensure that the basic assumptions of data appropriate for principal components factor analysis were met. This is an important preliminary step (Field, 2009). First, normality was checked. Based on review of the histograms, most variables were left or negatively skewed. It was decided to continue with the analysis based on review of research indicating that the number of extracted factors and estimated factor loadings are minimally affected by non-normality (Kasper & Ünlü, 2013). However, this is a limitation of note in the current study. Data generated from the likert-type items were continuous but discreet and deemed acceptable for PCA (Field, 2009). Based on a review of bivariate correlation table, there was absence of high multicollinearity, and histograms showed no outliers were present in the variables selected. The decision was made to proceed.

Principle components factor extraction was used to reduce the correlated observed variables to a smaller set of latent variables (Field, 2009). In their study of GTAs, teaching self-efficacy DeChenne et al. (2012) found the data generated from the CTSES loaded onto two factors: instructional strategies and creating a positive learning environment. Although the recommended number of 200 cases was not reached, and the number of cases was short of five observations per variable, the Kaiser-Meyer-Olkin measure of sampling adequacy was .937. Field (2009) reports that KMO values between 0.8 and 1.00 indicate the sampling is adequate. Exploratory factor analysis was conducted and results interpreted keeping the sample size limitation in mind and using caution when interpreting the results.

To clarify the relationship between variables and factors, Varimax rotation was used (Field, 2009). The initial model with all 39 variables indicated seven factors. Communalities among all variables ranged from .605 - .845. The seven extracted factors accounted for a cumulative 69.9% of the total variance. Scree plot analysis using the Eigenvalue cutoff value of

1.0 indicated that the data could be explained by two factors using the guideline of the "break in the elbow" as a decision point. The third factor was nearly parallel, but the decision was made to rerun the analysis manually forcing the extraction of two variables as was performed by DeChenne et al. (2012). PCA analysis was conducted again, this time forcing the extraction of two factors. The two factors accounted for 53% of the total variance. Additional item analysis was conducted by reviewing the rotated component matrix. Given the sample size (n = 159), factor loadings of .40 were determined to be reliable (Stevens, 2002). The matrix revealed that two items: (a) select appropriate materials and (b) Design the structure and content of your class had factor loadings below the cutoff point of .40. Given this, and also because these tasks are often not controllable by adjunct instructors, these items were discarded in further analysis. Additional visual review of the data revealed that items targeting activities associated with assessing student learning also had low factor loadings. After returning to scree plot, it was decided that because the break point was nearly even for two and three factors, an additional analysis manually forcing the extraction of three factors was conducted. This round of analysis indicated that three factors accounted for 57.7% of total variance, each with items with factor loadings above the .40 cutoff and were logically related to other items within the same factor yet distinct from items loading onto other factors. See Table 3 for the summary of factor analysis.

Table 3

Summary of Factor Analysis for CTSES - Adjunct Using Principle Components Analysis

Item	Factor Loadings		
How confident am I in my ability to…	Instructional skills	Creating a positive environment	Assessing student learning
Develop teaching skills using various means	.790		
Update knowledge of the subject you are teaching	.713		
Master the material you cover in class	.699		
Clearly identify course objectives	.699		
Specify learning goals you expect students to attain	.699		
Evaluate the degree to which course objectives have been met	.681		
Reflect on teaching practices with the aim of making improvements	.637		
Prepare teaching materials	.631		
Spend necessary time to plan classes	.627		
Maintain high academic expectations	.620		
Provide students with detailed feedback about their progress	.590		
Evaluate effectiveness in light of student feedback	.565		
Use formative assessment to gather information about students' academic progress	.553		
Use information derived from self-reflection to improve teaching	.512		
Employ methods that permit you to assess own teaching	.487		
Adapt teaching in response to SETs	.403		
Make students aware you have a personal investment in their learning		.734	
Encourage students to ask questions during class		.721	
Promote students' confidence in themselves		.710	
Make students feel their academic success is due to their efforts		.666	
Let students take initiative for own learning		.650	
Promote a positive attitude toward learning in your students		.632	
Provide support and encouragement to students having difficulty learning		.625	
Think of students as active learners		.614	
Ensure students resolve difficulties they encounter while learning		.602	
Calmly handle classroom problems		.588	
Ensure that students consider themselves capable of learning material in your class		.565	
Create a positive classroom climate for learning		.559	
Promote student participation in your classes		.510	
Show students respect through actions		.506	
Be flexible in teaching even if you have to alter plans		.488	
Make students aware of the relevance of what they are learning		.469	
Develop different assessment methods depending on learning goals			.720
Decide on the most appropriate evaluation method for a course			.762
Adequately grade students exams and assignments			.738
Adapt to students' needs when planning courses			.655
Accurately evaluate your students' academic capabilities			.430
Eigenvalue	**17.79**	**1.86**	**1.69**
Percent of total variance explained	**48.09**	**5.05**	**4.56**
Cumulative percent of variance	**48.09**	**53.14**	**57.69**
Factor Mean	**5.12**	**5.20**	**4.94**
Cronbach's α	**.94**	**.94**	**.83**

Definition of Variables

Dependent variables. The three composite variables created based on factor analysis and an overall efficacy score were used as dependent variables in the subsequent analyses. They were: (a) instructional skills, (b) creating a positive classroom environment, (c) assessing student learning, along with (d) overall teaching self-efficacy. It is of note that the term *instructional skills* is used in this study to refer to specific teaching tasks/behaviors employed by instructors. Previous studies have also referred to these tasks as *instructional strategies* or *pedagogical strategies*. See Table 4 for the descriptive statistics for the composites based on the factor analysis.

Table 4

Descriptive Statistics for Dependent Variables

Variable	Mean	Std. Dev.	Range	Max	Min
Creating a Positive environment	5.20	0.66	3.88	6.00	2.13
Overall efficacy	5.13	0.65	3.62	6.00	2.38
Instructional skills	5.12	0.68	3.81	6.00	2.19
Assessing student learning	4.94	0.88	5.00	6.00	1.00

Note: Items rated on Likert-type scale, 1 = Not at all confident to 6 = Completely confident

Independent variables. Multiple demographic variables served as independent variables. They were: gender, race/ethnicity, academic discipline taught, years of higher education teaching experience, highest degree obtained, level of course taught, and course format most frequently taught. See Table 2 for demographics of survey participants. Additional information about teaching related background and adjunct type were collected for descriptive purposes only.

Quantitative Analysis

Following the preliminary factor analysis, several statistical analyses were conducted. First, to gain detailed information about how adjunct faculty rated their confidence for specific instructional skills, item-level data analysis was conducted. Descriptive analyses of each survey item included means, standard deviations, and maximum/minimum scores. Mode scores were also identified from the data to show the most frequently occurring score for each item.

Independent samples *t*-tests were conducted to explore the differences in each of the areas of teaching self-efficacy based on gender and level of courses taught (i.e. developmental versus non-developmental). One-way analyses of variances were conducted to explore differences in teaching self-efficacy scores based on academic division, highest degree obtained, race/ethnicity, and teaching format. Values of $p < .05$ were used to determine statistically meaningful results (Field, 2009). Pearson's product moment correlation was calculated to explore the relationships between each of the areas of teaching self-efficacy and teaching support services provided by the College. Prior to each analysis, data were reviewed to ensure that appropriate assumptions were met. Missing data was excluded on an analysis-by-analysis basis.

Open-ended Item Analysis

On the survey, adjunct faculty had multiple opportunities to provide open-ended responses. First, after each section in which adjunct faculty were asked about participation in teaching support services provided by the College (Convocation, mentoring, adjunct evaluation process, student evaluations of teaching, trainings/workshops), a space was provided for additional comments. Also, in the final section of the survey, instructors were asked three open-ended questions. All items were analyzed and coded. The iterative coding process was guided by procedures outlined in Corbin and Strauss (2015). Data from these questions were coded by hand using in vivo coding and two a priori codes based on important context and construct-

related variables (Creswell & Plano Clark, 2011). These codes were: (a) institutional teaching support services provided by the College and (b) sources of efficacy. See Table 5.

Table 5

A Priori Codes and Examples of Qualitative Data

Theme	Code(s)	Examples of potential data
Institutional Teaching Supports	Convocation	*I learned a lot at convocation.*
	Mentoring	*My mentor was a great source of support.*
	Student evaluations of teaching	*The only source of feedback about my teaching is student evaluation.*
	Workshops/trainings	*I wish there were more training opportunities.*
	Adjunct faculty evaluation process	*I received some great feedback after my class was observed.*
Sources of teaching self-efficacy	Mastery experience	*I've been teaching for a long time. I feel like I have gotten better over time.*
	Vicarious experience	*I had a lot of great teachers myself and I try to emulate their behaviors.*
	Social/Verbal persuasion (feedback)	*My supervisor offered praise for my teaching.*
	Emotional arousal	*I feel a high after a great class.*

A list of codes was established based on this round of coding. After initial coding of all items, the codes were reviewed. Codes that were duplicative were merged and other broad codes were divided. All of the items were coded again using the new codes. Next, the responses were loaded into Atlas.ti for organization and for another round of coding using the revised list of codes.

Selection of Data for Qualitative Explanation

Guided by sequential explanatory mixed methods design, the purpose of the next phase of the study was to explain and elaborate on the results of the survey data (Creswell & Plano Clark, 2011). This was achieved by selecting data from the surveys to explore in interviews with a sample of current adjunct faculty at MACC. Based on the selected data, the semi-structured interview protocol was modified. To provide insight into this process, selected results are previewed in this section. Survey data provided an overview of teaching self-efficacy and highlighted differences in teaching self-efficacy between males and females and between new and more experienced instructors. Therefore, purposeful sampling of interview participants was used to ensure that both males and females and new and experienced adjunct faculty were included. Given the survey data, through factor analysis, item-level analysis, and analysis of open-ended responses, four main areas were identified as needing additional explanation. First, data from the survey indicated that assessing student learning was the area with lowest efficacy scores (M = 4.94, SD = 0.88). This was selected as an area of additional exploration in the interviews. Second, in open-ended responses from the survey, adjunct faculty identified students as one of the biggest challenges to their teaching self-efficacy. Further explanation was needed to gain a complete picture of the nature of specific challenges associated with teaching community college students. Third, although survey data indicated that adjunct faculty's teaching self-efficacy was high overall (M = 5.13, SD = 4.94), it failed to provide insights into sources of self-efficacy. Correlational analyses revealed a weak relationship between both adjunct convocation and student evaluations of teaching and teaching self-efficacy; more information was needed about what experiences and/or supports contributed to teaching self-efficacy beliefs. Last, item-level analysis of efficacy items coupled with open-ended responses

indicated that instructors felt lesser degrees of confidence in their abilities to develop their teaching skills and felt the need for additional trainings and workshops to boost confidence in this area. Therefore, learning more about their thoughts on trainings and workshops that would be helpful in supporting the development of instructional skills was also an area selected for further explanation.

Qualitative Data Collection: Interviews

Interview protocol development. The semi-structured interview protocol used in this study was developed and approved by the researcher's institutional IRB prior to data collection. The semi-structured format provided flexibility and allowed for follow-up questions and probes based on information that emerged in the interviews (Merriam, 2009). Initial questions were derived from construct-related research and contextual knowledge. As an example, Morris and Usher (2011) interviewed full time faculty about teaching self-efficacy and several questions from their protocol were used in creating the protocol for the current study. Following quantitative data collection, the interview protocol was also modified to include additional questions and probes based on information that was selected for explanation from the surveys. For example, an additional question about working with community college students was added as this was identified as a significant area of challenge. Also, specific questions were added to solicit information about instructors' confidence in assessing student learning and thoughts on trainings/workshops based on survey data. As the new questions and probes did not deviate from the original research questions and did not solicit sensitive or personal information, changes to the interview guide were not submitted for additional IRB review. The revised version was subjected to a content review process to ensure that the questions were relevant, clear, and understandable. One former and one current adjunct instructor, neither affiliated with MACC, were asked to review the interview protocol and share their thoughts. Both indicated that the

questions were clear and pertinent to their lived experiences as instructors. For the semi-structured interview protocol see Appendix D.

Interview recruiting. Purposeful sampling was used to identify potential interview participants. The researcher contacted Deans of each of the three academic divisions at MACC. The study was explained and each was asked to either recommend potential participants or redirect the researcher to the appropriate division personnel who would provide assistance. Specific instructions were provided that recommendations should include both new and experienced adjunct faculty with maximum variability (subject taught, gender, etc.). One redirected the researcher to an associate dean, and the other named an administrative assistant as the point of contact. Each contact provided a list of names and email addresses of potential participants based on the criteria specified by the researcher. The lists were not inclusive of all adjunct faculty in the divisions. Potential interviewees were invited to participate in the study via email. To minimize any perceived pressure to participate, each email had a general salutation and did not mention that division deans or staff had provided the names and email addresses. A copy of the informed consent document was included in the email invitation and potential participants were asked to review the document and were reminded that participation was voluntary. Response rates were low; 78% failed to reply to the email invitations.

Interviews. After consenting to participate, a mutually agreeable time for the researcher and instructor and a place to meet was scheduled for each of the interview sessions. Seven of the interviews took place in either classrooms or available conference room space at MACC. One interview was conducted at a different institution of higher education in the same geographic vicinity at the request of the participant and one was conducted via phone. Upon meeting, the researcher engaged in conversation with the participant to establish rapport, explained the

purpose of the study, reviewed the informed consent, and reminded the participant that the session would be recorded using an audio device. Each participant was reminded that he/she could end the interview at any time and did not have to answer any questions that he/she did not want to answer. Next, questions from the interview guide were asked in a semi-structured format that allowed for follow-up and probing questions as needed (Merriam, 2009). At the conclusion of the interviews, participants were asked to complete a brief demographic survey. All interviews took less than one hour, the shortest interview lasted 19 minutes and the longest, 56 minutes. Following each interview, time was devoted to writing reflections and observations from the interviews along with any of the researcher's personal reactions.

Interview participants. Three adjunct faculty from each of the three academic divisions (AHSS, MNHS, EBPS), for a total of nine, agreed to be interviewed. Even with the small sample size, variability was achieved with a balanced mix of men (n = 4) and women (n = 5), new and experienced, and a range of academic disciplines and professional/occupational areas represented. In the reporting of interview data, academic discipline taught has been omitted to protect the confidentiality of participants. Eight of the nine participants were White and one was African-American. Adjunct faculty interviewed averaged 5.8 years of higher education teaching experience. Some were in their first semester of teaching and others had over 15 years teaching under their belts. One instructor taught exclusively online. Four indicated a desire to become full-time faculty and four taught part-time in addition to a full-time job. Highest degrees obtained ranged from Bachelor's to Ph.D. Saturation of themes was achieved with the nine participants. No new themes emerged from the later interviews (Merriam, 2009).

Respondent validation. To increase the trustworthiness of the data, upon conclusion of each interview, participants were informed of the opportunity to review the transcript from the

session (Merriam, 2009). Seven of the participants requested to review copies of their transcripts and two declined. The interviews were transcribed and shared with seven of the participants for respondent validation. Transcripts were shared via a secure password-protected Dropbox file. Each file was accessible only by the researcher and the participant using the password shared via a separate email message. Participants were encouraged to review the transcript carefully and make any revisions, suggestions, or deletions as they deemed appropriate. A time frame of three weeks was provided for this review process. Two participants made revisions to inconsequential details. Five accepted the transcripts as written. Failure to respond to member checking requests served as implied approval for two of the participants. Approved transcripts were subsequently analyzed.

Qualitative Data Analysis

Interview transcripts were entered into Atlas.ti version 1.0.51 qualitative data analysis software for organization and analysis. Coding was conducted following guidelines outlined in Corbin and Strauss (2012). One interview transcript was selected for initial coding. For the coding process, codes established during the analysis of open-ended survey items were used along with the two a priori codes: (a) sources of efficacy and (b) teaching support services provided by the College. In vivo coding was used to identify new emergent themes that were unique from those evidenced in open-ended survey data. A comprehensive coding guide manual was created listing each code, its associated definition, and decision trees for assigning codes. The remaining transcripts were coded using the manual.

Trustworthiness

Intercoder reliability. To increase trustworthiness, a second independent researcher with expertise in qualitative data analysis was invited to code a sample of the data. Both researchers met to go over the code manual and coded small sample of data together. Then, the

outside researcher was given a sample that represented approximately 10% of the total data including one complete interview transcript and several open-ended responses from the surveys. After this initial meeting, the outside researcher coded the data independently. In a follow-up meeting, the two researchers reviewed and compared coding line-by-line. Inter-coder reliability was high. In the cases of code assignments that did not match, coding decisions were discussed. Through explanation and negotiation, agreement was reached. The primary researcher returned to further scrutinize codes that emerged from discussion points during this process. After review and reconciling any discrepancies, the next phase of data analysis involved organizing the codes into multiple themes and then grouping them into broader categories (i.e. thematic families) (Merriam, 2009). Eleven themes organized into four categories emerged from this process.

Connected Mixed Data Analysis

An important phase of mixed methods research is merging the two forms of data. Qualitative data served to explain, clarify, and complement quantitative data (Creswell & Plano Clark, 2011). Instances of both convergence and divergence of information were identified. Data about institutional teaching supports from the interviews was combined with open-ended data from the surveys to gain insights into the relationships between adjunct faculty's use of institutional teaching supports and teaching self-efficacy. Findings from both forms of data collection were merged and any differences or inconsistencies were reconciled through further analysis. Data from the interviews were analyzed to identify ways in which the qualitative data explained differences in teaching self-efficacy in assessing student learning and factors that influenced teaching self-efficacy not apparent from the surveys. Meta-inferences about instructors' teaching self-efficacy beliefs and the factors that influences those beliefs based on the combination of both forms of were used to develop an overall interpretation of their teaching self-efficacy and recommendations for the future (Creswell & Plano Clark, 2011).

Ethical Considerations

Throughout this process, it was important to acknowledge and take measures to discipline researcher subjectivity and biases. The researcher was an adjunct instructor at this institution and although this positionality provided unique insights, a network of established connections, and a nuanced understanding of contextual experiences, keeping subjectivity in check was paramount. The researcher engaged in reflective journaling to bracket assumptions and biases (Merriam, 2009).

Prior to sampling research participants, the proposed study was submitted for multiple review processes to verify adherence to policies of protection for human subjects. The study proposal was reviewed by the researcher's institutional IRB and by institutional reviewers at MACC and the pilot institution. No names or identifying information were tied to survey data or interview transcripts. There was minimal physical, psychological, or professional harm or risk for participants in the study and the information collected was not of an overly sensitive nature. Participation was voluntary and instructors had the option to end their participation at any time while completing the survey or during the interviews. During the survey, the researcher did not have access to adjunct faculty's emails or identifying information unless the participant chose to share his or her email for a chance to win an incentive. All survey data was stored on a password-protected computer, and any study related documents (informed consents and interview demographic forms) were stored in a locked, secure file cabinet accessible only by the researcher.

For the interview process, emails and names were collected for the purposes of recruiting only. Transcripts were recorded using a digital audio device. Audio recordings were saved in a secure password protected drive then deleted from the device after respondent validation processes. Each interview transcript was identified by an alpha code and date (no name). Each

code and date was tied to an email address on a code sheet for the purposes of member checking/respondent validation. The code sheet was accessible only by the researcher. All transcripts and the temporary code sheet were stored in a secure, password protected Google drive. No paper copies of transcripts were created. Transcripts were shared with each individual participant a secure password-protected Dropbox folder. Each folder was accessible only by the researcher and the participant. The code sheet was deleted when all transcripts were returned from respondents. Audio recordings were deleted following respondent validation of transcripts.

Chapter Four: Results

In this chapter, quantitative data from the surveys and qualitative data from both the surveys and interviews will be presented. Section by section, data will be reported and organized using the research question that guided each analysis.

Adjunct Faculty's Perceptions of Teaching Self-Efficacy

In answer to the first research question, "How do adjunct faculty perceive their teaching self-efficacy in the areas of instructional skills and creating a positive learning environment?" teaching self-efficacy was measured with 39 likert-type items on a scale of 1 = Not at all confident to 6 = Completely confident. In addition to calculating the mean score for overall teaching self-efficacy, using factor analysis, items were reduced to three areas: instructional skills, creating a positive classroom environment, and assessing student learning. Mean scores in each of the three areas were high ranging from 4.94 to 5.2. The overall teaching self-efficacy score comprised of all items was also high (M = 5.13). Negative or left skew indicating elevated scores were also observed by visual inspection of histograms for each of the efficacy related survey items. See Table 4 for a summary of descriptive statistics for each of the dependent variables.

Table 4

Descriptive Statistics for Dependent Variables

Variable	Mean	Std. Dev.	Range	Max	Min
Creating a Positive environment	5.20	0.66	3.88	6.00	2.13
Overall efficacy	5.13	0.65	3.62	6.00	2.38
Instructional skills	5.12	0.68	3.81	6.00	2.19
Assessing student learning	4.94	0.88	5.00	6.00	1.00

Note: Items rated on Likert-type scale, 1 = Not at all confident to 6 = Completely confident

Although efficacy scores were overall high, there was a slight differentiation in scores between the areas assessed. Teaching self-efficacy beliefs were highest in creating a positive learning environment, followed by overall teaching self-efficacy, and then efficacy for instructional skills. Assessing student learning was the area with the lowest efficacy scores. Given the observed differences in means, item-level analysis provided additional detailed information about how adjunct faculty rated their confidence on their abilities to successfully perform specific teaching skills. See Table C1 in Appendix C for a complete summary of descriptive statistics for all individual survey items. Data trends for items in each of the three areas of teaching self-efficacy are presented next.

Creating a Positive Learning Environment. The highest efficacy scores were observed in the area of creating a positive learning environment. The item captured by this factor, "Show students respect through actions" (M = 5.56) was the highest scored item on the survey. See Table 6 for items in this area ranked from highest efficacy to lowest.

Table 6

Item-Level Descriptives for the Factor Creating a Positive Learning Environment

Item	Mean	Std. Dev.	Mode	Max	Min
Show students respect through actions	5.56	0.69	6	6	2
Be flexible in teaching even if you have to alter plans	5.40	0.69	6	6	2
Make students aware of the relevance of what they are learning	5.40	0.74	6	6	2
Create a positive classroom climate for learning	5.38	0.89	6	6	3
Promote a positive attitude toward learning in your students	5.36	0.80	6	6	2
Make students aware you have a personal investment in their learning	5.35	0.82	6	6	3
Encourage students to ask questions during class	5.34	1.14	6	6	1
Provide support and encouragement to students having difficulty learning	5.31	0.76	5	6	1
Make students feel their academic success is due to their efforts	5.20	0.91	5	6	1
Promote students' confidence in themselves	5.12	0.83	5	6	1
Think of students as active learners	5.03	0.96	5	6	1
Promote student participation in your classes	5.02	1.01	5	6	2
Calmly handle classroom problems	4.97	1.20	5	6	1
Ensure students consider themselves capable of learning material in your class	4.95	1.04	5	6	2
Ensure students resolve difficulties they encounter while learning	4.88	0.92	5	6	2
Let students take initiative for own learning	4.81	1.00	5	6	1

Note: Likert-type items rated on scale 1= Not at all confident, 6 = Complete confidence

Instructional skills. Overall teaching self-efficacy was scored second highest followed the area of instructional skills. This factor captures the widest range of pedagogical skills and practices of the areas assessed. For this factor, items related to content expertise were rated highest. These included "Master the material you cover in class" (M = 5.43), and "Update knowledge of the subject you are teaching" (M = 5.40). This indicates that of the broad range of pedagogical skills captured in the instructional skills factor, instructors rated their efficacy for content mastery as high in comparison to other skills. The lowest scoring item on the survey, "Employ methods that permit you to assess your own teaching" was also in this area. See Table 7 for the ranking of individual items comprising the instructional skills factor.

Table 7

Item-Level Descriptives for the Factor Instructional Skills

Item	Mean	Std. Dev.	Mode	Max	Min
Master the material you cover in class	5.43	0.74	6	6	3
Update knowledge of subject you are teaching	5.40	0.74	6	6	2
Maintain high academic expectations	5.40	0.75	6	6	2
Clearly identify course objectives	5.39	0.81	6	6	2
Prepare teaching materials	5.37	0.77	6	6	2
Specify learning goals you expect students to attain	5.33	0.82	6	6	3
Provide students with detailed feedback about their progress	5.23	0.83	6	6	1
Reflect on teaching practices with the aim of making improvements	5.20	0.85	6	6	2
Spend necessary time to plan classes	5.20	0.96	6	6	1
Use information derived from self-reflection to improve teaching	5.16	1.02	6	6	1
Evaluate the degree to which course objectives have been met	5.12	0.90	5	6	1
Evaluate effectiveness in light of student feedback	4.97	0.91	5	6	2
Adapt teaching in response to SETs	4.85	1.09	5	6	1
Develop teaching skills using various means	4.81	1.12	5	6	1
Use formative assessment to gather information about students' academic progress	4.67	1.12	5	6	1
Employ methods that permit you to assess your own teaching	4.52	1.21	5	6	1

Note: Likert-type items rated on scale 1= Not at all confident, 6 = Complete confidence

Assessing student learning. Adjunct faculty rated teaching self-efficacy beliefs in the area of assessing student learning lowest. Items in this area including "Accurately evaluate your students' academic capabilities," "Decide on the most appropriate evaluation method for a course," and "Develop different assessment methods depending on learning goals" had mean scores under 5.00. See Table 8.

Table 8

Item-Level Descriptives for the Factor Assessing Student Learning

Item	Mean	Std. Dev.	Mode	Max	Min
Adequately grade students exams and assignments	5.30	1.08	6	6	2
Adapt to students' needs when planning courses	5.00	1.00	5	6	2
Accurately evaluate your students' academic capabilities	4.87	1.01	5	6	2
Decide on the most appropriate evaluation method for a course	4.87	1.15	5	6	2
Develop different assessment methods depending on learning goals	4.67	1.42	6	6	1

Note: Likert-type items rated on scale 1= Not at all confident, 6 = Complete confidence

Differences in Teaching Self-Efficacy Based on Demographic Variables

Guided by the second research question, "Do levels of teaching self-efficacy differ by demographic variables and teaching appointment?" several analyses were conducted to explore differences in teaching self-efficacy based on demographic variables.

Gender. An independent samples *t*-test was conducted to compare scores in each of the three areas of teaching self-efficacy (instructional skills, creating a positive learning environment, assessing student learning) and overall self-efficacy for male and female instructors. Two percent of participants ($n = 3$) chose "prefer not to answer" for the gender question and were excluded from the analysis. Assumptions of homogeneity of variance and independence of scores were met. Keeping with convention, values of $p < .05$ were considered statistically meaningful (Field, 2009). Missing cases were excluded analysis by analysis.

There was a significant difference in the scores with females scoring higher than males in two areas. First, there was a statistically significant difference between males ($n = 55$, $M = 4.95$, $SD = 0.67$) and females ($n = 92$, $M = 5.12$, $SD = 0.67$) in the area of instructional skills $t(145) = -2.20$, $p = .046$. Second, in the area of assessing student learning, there was also a statistically significant difference between males ($M = 4.78$, $SD = 0.91$) and females ($M = 5.05$, $SD = 0.80$), $t(145) = -1.95$, $p = .05$. Differences in the area of overall efficacy narrowly missed the cutoff

with males (M = 4.98, SD = 0.62), females (M = 5.19, SD = 0.66); $t(145) = -1.93$, $p = .06$. There was not a statistically significant difference between males (M = 5.06, SD = 0.62) and females (M = 5.23, SD = 0.70) in creating a positive environment $t(145) = -1.52$, $p = .13$. Differences in teaching self-efficacy do not appear to be influenced by academic discipline. An analysis of covariance was conducted to explore differences based on gender with the interaction of discipline taught (by academic division grouping). The interactions were not significant for overall efficacy $F(2, 141) = .92$, $p = .40$; instructional skills, $F(2,141) = 1.30$, $p = .23$; creating a positive learning environment $F(2,141) = .59$, $p = .56$; or assessing student learning, $F(2, 141) = 2.85$, $p = .06$.

Level taught. Independent samples *t*-tests were also conducted to compare efficacy scores based on level taught. There was not a statistically significant difference between adjunct faculty teaching developmental courses (n = 70) and those teaching non-developmental courses (n = 69). By each of the areas of teaching self-efficacy, independent samples *t*-test results were as follows: overall teaching self-efficacy, developmental (M = 5.19, SD = 0.64), non-developmental (M = 5.04, SD = 0.69), $t(137) = 1.38$, $p = .17$; instructional skills, developmental (M = 5.20, SD = 0.65), non-developmental (M = 5.03, SD = 0.73), $t(137) = 1.39$, $p = .17$; creating a positive learning environment, developmental (M = 5.27, SD = 0.64), non-developmental (M = 5.07, SD = 0.71), $t(137) = 1.76$, $p = .08$; assessing student learning, developmental (M = 4.91, SD = 1.06), non-developmental (M = 4.94, SD = 0.71), $t(137) = -0.16$, $p = .87$.

Academic discipline. To explore the differences in areas of teaching self-efficacy based on academic discipline, teaching format, race/ethnicity, and years of higher education teaching experience, one-way analyses of variance were conducted. For analysis of variance based on academic discipline, the 15 academic disciplines represented on the survey were grouped into the

three academic divisions as organized by the College. The three academic divisions were: (a) Arts, Humanities, Social Sciences (AHSS), (b) Engineering, Business, Public Services (EBPS), (c) Math, Natural and Health Sciences (MNHS). For a listing of the number of participants in each of the academic subjects grouped by division see Table 2. Fifteen participants identifying "Other" as subject taught were excluded from this analysis. Based on one-way analysis of variance, at the $p < .05$ level, there were no statistically significant differences in instructional skills, $F(3,151) = 0.29$, $p = .83$; promoting a positive classroom environment, $F(3,151) = 1.17$, $p = .33$; assessing student learning, $F(3, 151) = 0.93$, $p = .43$; or overall teaching self-efficacy, $F(3,151) = .72$, $p = .54$ based on academic discipline taught grouped by academic division.

Other demographic variables. Differences based on additional demographic variables were also explored using one-way analyses of variance. Significance was determined using the $p < .05$ level for each ANOVA. No statistically significant differences were found based on race/ethnicity for overall teaching self-efficacy, $F(5,151) = 1.23$, $p = .30$; instructional skills, $F(5,151) = 1.31$, $p = .26$; creating a positive environment $F(5,151) = 1.11$, $p = .36$; or assessing student learning, $F(5,151) = 0.70$, $p = .62$. There was not a significant difference based on teaching format in the areas of overall efficacy, $F(3,153) = 0.85$, $p = .47$; instructional skills, $F(3,153) = 1.00$, $p = .39$; creating a positive environment, $F(3, 153) = 0.87$, $p = .46$, or assessing student learning, $F(3, 153) = 0.97$, $p = .41$. There were also no significant differences based on highest degree obtained for overall teaching self-efficacy, $F(4,152) = 0.953$, $p = .44$, instructional skills, $F(4, 152) = 1.06$, $p = .38$, creating positive environment, $F(4,152) = 0.69$, $p = .60$, or assessing student learning, $F(4,152) = 1.36$, $p = .25$.

Years of higher education teaching experience. To analyze differences based on years of higher education teaching experience, each of the areas of teaching self-efficacy scores,

instructional skills, creating a positive environment, assessing student learning, and overall teaching self-efficacy was subjected to a one-way analysis of variance with three levels of years of higher education teaching experience (a) 0-5 years, (b) 6-10 years, and (c) 11+ years. See Table 9 for a summary of means and standard deviations for efficacy scores.

Table 9

Means and Standard Deviations for Areas of Teaching Self-Efficacy Scores by Years of Experience

Grouping by Years of Experience	N	Areas of Teaching Self-Efficacy	Mean	SD
0-5 years	61	Instructional skills	4.84	0.76
		Creating a positive environment	4.96	0.80
		Assessing student learning	4.66	0.96
		Overall teaching self-efficacy	4.87	0.76
6-10 years	47	Instructional skills	5.23	0.57
		Creating a positive environment	5.29	0.53
		Assessing student learning	5.15	0.68
		Overall teaching self-efficacy	5.24	0.52
11+ years	51	Instructional skills	5.37	0.68
		Creating a positive environment	5.19	0.66
		Assessing student learning	5.10	0.88
		Overall teaching self-efficacy	5.33	0.65

Note: Likert-type responses rated on scale 1=Not at all confident to 6 = Completely confident

These scores reveal that the area creating a positive learning environment was scored highest for instructors with 0-5 years of experience those with 6-10 years of teaching experience. The area instructional skills was rated highest among adjunct faculty with 11+ years of experience. One-way analysis of variance indicated differences between the groups in each of the areas of teaching were statistically significant at the $p < .05$ level. See Table 10.

Table 10

One-Way Analysis of Variance Areas of Teaching Self-Efficacy by Years of Higher Education Teaching Experience

Source		*df*	*SS*	*MS*	*F*	*p*
Instructional skills						
	Between groups	2	8.24	4.12	10.05	.000*
	Within groups	156	63.99	0.41		
	Total	158	72.24			
Creating a positive learning environment						
	Between groups	2	5.32	2.66	6.48	.002*
	Within groups	156	64.10	0.41		
	Total	158	69.42			
Assessing student learning						
	Between groups	2	8.43	4.22	5.80	.004*
	Within groups	156	113.42	0.73		
	Total	158	121.85			
Overall teaching self-efficacy						
	Between groups	2	6.84	3.42	9.05	.000*
	Within groups	156	58.93	0.38		
	Total	158	65.76			

Note: *Significant at the $p < .05$ level.

Post hoc Tukey comparisons were subsequently conducted to reveal between group differences. This analysis indicated that adjunct faculty with 0-5 years of higher education teaching experience have statistically significant lower scores in the areas of teaching self-efficacy compared to adjunct faculty with 6 – 10 and those with 11+ years of experience. Instructors with 6-10 years of experience did not have statistically significant differences compared to those with over 11 years of experience in any of the four areas of teaching self-efficacy. See Table 11.

Table 11

Tukey Comparison for Areas of Teaching Self-Efficacy by Years of Experience Groups

Dependent Variable	Comparisons	Mean Difference	Std. Error	Sig.	95% CI Lower Bound	95% CI Upper Bound
Instructional skills						
	0-5 vs. 6-10	-0.38	0.12	.007*	-0.68	-0.09
	0-5 vs. 11+	-0.52	0.12	.000*	-0.81	-0.23
	6-10 vs. 11+	-0.14	0.13	.53	-0.44	0.17
Creating a positive environment						
	0-5 vs. 6-10	-0.32	0.12	.03*	-0.61	-0.03
	0-5 vs. 11+	-0.41	0.12	.003*	-0.70	-0.13
	6-10 vs. 11+	-0.09	0.13	.76	-0.40	0.22
Assessing student learning						
	0-5 vs. 6-10	-0.50	0.17	.009*	-0.89	-0.11
	0-5 vs. 11+	-0.45	0.16	.017*	-0.83	-0.07
	6-10 vs. 11+	0.05	0.17	.96	-0.36	0.45
Overall teaching self-efficacy						
	0-5 vs. 6-10	-0.37	0.12	.006*	-0.65	-0.09
	0-5 vs. 11+	-0.46	0.12	.000*	-0.74	-0.19
	6-10 vs. 11+	-0.09	0.12	.73	-0.39	0.20

Note: * Significant at $p < .05$. CI = Confidence interval.

In summary, to answer to the second research question "Do levels of teaching self-efficacy differ by demographic variables and teaching appointment?" according to quantitative data from the current sample, levels of teaching self-efficacy do not significantly differ by race/ethnicity, level taught, format taught, or highest degree. There are statistically significant differences in efficacy levels of males compared to females in the areas of instructional skills and assessing student learning, but not for promoting a positive classroom environment or overall teaching self-efficacy. Teaching self-efficacy scores between adjunct faculty teaching for five years or less are lower in the each of the areas surveyed and overall teaching self-efficacy than

for those with six or more years' higher education teaching experience. There were no statistically significant differences between instructors teaching six to ten years and those teaching for more than ten years.

Given the differences in teaching self-efficacy based on years of experience, one additional analysis was conducted to further illuminate the relationship between the two. A Pearson product-moment correlation coefficient was computed to examine the relationship between years of teaching experience in higher education and each of the dependent variables. There was a small statistically significant positive correlation between the years of experience teaching in higher education and overall teaching self-efficacy $r(157) = .23$, $p < .01$. There was also a small significant positive relationship between years taught in higher education and instructional skills $r(157) = .27$, $p < .01$ and between years taught in higher education and promoting positive environment $r(157) = .19$, $p < .05$. The relationship between years taught in higher education and assessing student learning was not significant $r(157) = .13$, $p < .05$. In this sample, as years of experience teaching in higher education increased, teaching self-efficacy for instructional skills, promoting a positive environment, and overall teaching self-efficacy also increased.

Support Services and Teaching Self-Efficacy

To answer the third research question "What is the relationship between teaching-related support services provided by the College and teaching self-efficacy?" a series of correlational analyses were conducted. Several teaching related support services that MACC provides were included: adjunct convocation, formal mentoring relationships, student evaluations of teaching, the adjunct evaluation process, and trainings/workshops. On the survey, for each of the services, participants answered a screening question, "Did you participate in…." Respondents selecting "Yes" were presented with the subsequent likert-type item, "If yes, how much did this influence

your effectiveness as an instructor?" scored on a scale of 1 = Not at all influential to 6 = Extremely influential. Participants answering "No" to the screening question skipped over this item. Consequently, there was a great deal of variation in the sample size for each of the services that were included in the survey. Due to this, attempts at creating a regression model to predict teaching self-efficacy inclusive of all of the services did not yield significant results. See Table 12 for descriptives for each of the services.

Table 12

Descriptives for Teaching Support Services Provided by the College

Support Service	N	Mean	Std. Dev.	Range	Max	Min
Mentoring	38	4.50	1.25	5.00	6.00	1.00
SETs	145	4.14	1.15	5.00	6.00	1.00
Trainings	90	4.06	1.13	5.00	6.00	1.00
Adj. eval. process	85	4.03	1.08	5.00	6.00	1.00
Convocation	142	3.41	1.34	5.00	6.00	1.00

Note: 1=Not at all influential, 6 = Extremely influential

Relationships between the services and areas of teaching self-efficacy were analyzed by calculating Pearson's product moment correlations for each. Significance of correlations was determined using guidelines outlined by Cohen, Cohen, West, & Aiken (2003). Missing data was excluded on an analysis-by-analysis basis. Correlation scores are listed in Table 13.

Table 13

Pearson's Product Moment Correlations for Support Services with Instructional Skills, Creating a Positive Environment, Assessing Student Learning, and Overall Efficacy

		Areas of Teaching Self-Efficacy			
Support Service	N	Instructional Skills	Creating a positive environment	Assessing Student Learning	Overall Teaching Self-Efficacy
SETs	145	.28**	.21*	.16	.25**
Convocation	142	.17*	.19*	.07	.18*
Trainings/Workshops	90	.17	.18	.08	.18
Adjunct evaluation process	85	.11	.01	-.08	.04
Mentoring	38	.12	.10	.27	.16

Note: **Correlation is significant at the .01 level (2-tailed), *Correlation is significant at the .05 level (2-tailed). Also note *N* for each analysis.

In summary, in the current sample, there is a small significant positive relationship between student evaluations of teaching and overall teaching self-efficacy. SETs are also related to efficacy for instructional skills and creating a positive learning environment. There is also a small positive significant relationship between convocation and overall teaching self-efficacy, instructional skills, and creating a positive learning environment. No statistically significant relationships were found between teaching self-efficacy (all areas), attending trainings/workshops, mentoring, or the adjunct evaluation process.

Selecting Data for Further Explanation via Interviews with Adjunct Faculty

This section explains how survey data were selected for further explanation in the interviews. This was an important step in the explanatory sequential mixed methods research design that guided the study. The survey provided an overview of teaching self-efficacy and highlighted differences in teaching self-efficacy between men and women and between new and more experienced adjunct instructors. This information was used to inform the second phase of

data collection, interviews with select adjunct faculty at MACC. The differences that were highlighted in survey data guided the purposeful sampling of interview participants that included both men and women and new and experienced instructors. In addition to purposeful sampling to further explain differences in teaching self-efficacy, three other areas were identified as needing additional explanation. First, data from the survey indicated that assessing student learning was the area with lowest efficacy scores. This was selected as an area of additional exploration in the interviews. Second, in open-ended responses from the survey, instructors identified students as one of the biggest challenges to their teaching self-efficacy. Further explanation was needed to gain a more in-depth understanding of the nature of specific challenges associated with teaching community college students. Third, survey information did not provide insights into sources of self-efficacy. Overall, efficacy scores were high and although correlational analyses revealed a small positive relationship between both convocation and student evaluations of teaching and teaching self-efficacy, more information was needed about what experiences and/or supports contributed to adjunct faculty's teaching self-efficacy beliefs. Before proceeding with the presentation of the results for how the interviews helped to explain survey data, it is important to first present interview data.

Teaching Self-Efficacy Sources, Challenges, and Supports

Data from the interviews and open-ended survey responses provided key insights that contributed to answering the fourth research question, "What do adjunct faculty identify as sources, challenges, and supports that influence their teaching self-efficacy?" First, to gain insight into the teaching self-efficacy beliefs of this sample, adjunct faculty were asked, "How would you rate your confidence in teaching undergraduates on a scale of 1 = Not at all confident and 10 = Complete confidence?" The one to 10 scale was selected for two reasons: (a) this is a replication of a question from Morris and Usher (2011), and (b) the likert-responses from the

survey were measured on a scale of one to six and this yielded scores a limited range of scores that were skewed toward higher ratings of efficacy. Expanding the scale to one to 10 allowed for an increased range of scores and increased the sensitivity of the measure. Table 14 shows subjective confidence ratings for each adjunct faculty interviewed and a brief explanation of why they selected those numbers using their own words.

Table 14

Summary of Interview Participants' Subjective Teaching Self-Efficacy Ratings

Participant	Years of higher ed. teaching experience	Other teaching related background	Confidence rating in teaching 1 to 10	Explanation
1. Male	<1	Former high school teacher	6	"I haven't done it in a year, you know you spend a year not doing it and oddly enough, you get rusty. In terms of preparation, I'm closer to a 10."
2. Male	<1	Conducted corporate trainings	8	"I'm confident because I know what I am doing…some days I feel like a two and some days I feel like a 10…I know the [material] in this class and I feel very confident in that."
3. Female	1.5	Masters in Education (No prior teaching)	5 - 8	"I am still learning how to teach. I started with minimal support materials and I'm gradually building those support materials.... If I have a good class day and there's a lot of positive energy and excitement, then I'm an eight."
4. Male	2	Field trainer for new employees	5 - 8	"Right now, with the role I am in, I would put myself at a five. I am learning…I still have a lot of questions…when I can bring in my real life experience…I would rate myself about an eight."
5. Female	3	Trainer for the government	9.5	"There's always something to learn, you know there's I think the biggest challenge, you know you could be the smartest person in the room and you know the material, but you have to be able to convey it to your students in a way that they can understand and they can absorb the information." [Identified subject matter expertise as biggest strength in teaching.]

6. Female	4	Teaching adult education workshops	8 - 9	"It would depend on the class. I would not put any of them at a 10 because I am always improving." [Courses taught more frequently would be rated higher.]
7. Female	5	20+ years public speaking/trainer	8	"…I'm constantly looking to revamp…and that is why I say an eight. It's not that I am struggling, it's that I'm constantly looking to fine tune and advance in what I'm doing."
8. Male	18	Graduate teaching assistant	8 - 10	"It's pretty high. There is always something I can learn or do better so I would say an eight. I've been teaching for many years."
9. Female	20+	Taught at multiple higher ed. institutions	6 - 7	[Rating based on current experience teaching a new academic subject/class.] "The confidence level isn't as good as it should be but it is growing…. I do have a rather diverse background. I think I get to bring in insights from different areas."

Note: Confidence rated on a scale of 1 = Not at all confident to 10 = Completely Confident. Academic division affiliation omitted to protect the confidentiality of participants.

Next, the qualitative data from both the open-ended survey items and interviews was organized into eleven themes, organized into four overarching categories: (a) adjunct faculty and teaching (b) challenges to teaching self-efficacy, (c) teaching self-efficacy supports, and (d) sources of teaching self-efficacy. The first category, adjunct faculty and teaching, emerged from data analysis and the other three categories were derived directly from research question number four, "What do adjunct faculty identify as sources, supports and challenges that influence their teaching-self efficacy?" A summary of categories and themes are presented in Table 15.

Table 15

Summary of Categories and Themes from Qualitative Data

Category	Theme(s)	Summary
1. Adjunct faculty and teaching	1. Motivations for teaching	Adjunct faculty revealed motivations for teaching including aspirations to become full-time faculty and teaching for the love of the profession.
	2. Teaching strengths	Identified areas of strength included content expertise, promoting a positive classroom environment, and communication with students.
	3. Critically reflective educators	Adjunct faculty reflected on their teaching with the goal of making improvements and independently solicit feedback from students.
2. Challenges to teaching self-efficacy	4. Challenges related to serving students	Wide range of student abilities and experiences, lack of preparedness for college, lack of effort/motivation, and multiple outside pressures for students all present challenges to teaching self-efficacy.
	5. Challenges related to working conditions	Effective time management, communication issues, not feeling connected or integrated into the College, lack of effective onboarding, inadequate pay, and tenuous position with the College were identified as challenges.
	6. Challenges related to teaching skills	Instructional skills and assessing student learning were identified as areas of lesser confidence.
3. Teaching self-efficacy supports	7. Services provided by the College	Convocation, mentoring, student evaluations of teaching, the adjunct evaluation process, and trainings/workshops were discussed.
	8. Support from personnel	Adjunct faculty identified multiple sources of support at the College with department chairs the most frequently mentioned, followed by support staff and full-time faculty.
	9. College climate/environment	Many adjunct faculty offered praise for the positive environment they experience working for the College.
4. Sources of teaching self-efficacy	10. Sources of efficacy for new adjunct faculty	New adjunct faculty identified feedback as exerting the most influence on teaching self-efficacy followed by teaching-related experience, emotional experience, and vicarious experiences.
	11. Sources of efficacy for experienced adjunct faculty	Experienced adjunct faculty identified accumulated teaching experience as the most significant contributor to teaching self-efficacy followed by feedback.

Category 1: Adjunct Faculty and Teaching

Theme 1: Motivations for teaching. Adjunct faculty discussed their motivations for teaching part-time at the college. Several expressed their desire to become full-time faculty. For example, a first semester instructor shared, “The dream is to take on the full time job.”

However, more frequently than that, in the current study, adjunct faculty talked about love of teaching and finding personal, intrinsic rewards in teaching. Another new adjunct faculty explained, "It's very fulfilling to me to know that I am making a difference in each and every one of these students' lives, providing them with the most useful knowledge in and out of the classroom and beyond college." From a first semester instructor, "Yeah, teaching is rad, that's the best word, it's super great. You should cite me on that, teaching is rad."

Theme 2: Teaching strengths. Reflecting on their teaching, adjunct faculty identified perceived areas of strength. Many felt that content expertise was an area of strength. For example, a second year instructor said, "I know the [material] in this class and I feel very confident in that." Also, promoting a positive learning environment was a frequently mentioned area of strength. A veteran adjunct faculty with over a decade of experience explained, "I like it when you see a student who is discouraged or is having trouble with something and they have talked to you or you have talked to them and their energy changes, you know that you have done something outside of just simply transmitting a volume of information, you have changed their attitude or they have changed their attitude and you have been the catalyst for that happening." A participant with five years' teaching experience offered further evidence of promoting a positive classroom environment, "I've had students say things like…in your class we got to know people, we work together, so that's I think a strength for me is not only getting them passionate about the topic but getting them to know each other and work together." Finally, promoting engagement through communication with students was identified as a specific strength for several instructors. For example, a 15+ veteran adjunct faculty stated, "I believe that communication is one of the most important things in my class." From another veteran, "I tell them it is almost impossible to fail my class if you are communicating," and an instructor with

four years' experience said, "…on my official evaluations, communication, I generally am rated the highest…."

Theme 3: Critically reflective educators. Adjunct faculty described engaging in self-initiated reflective practices with the goal of improving teaching. An instructor said, "…every semester, I improve things. I have a document of, that's called MACC improvements, and it is everything…I get an idea and I write it down. And then before each semester I try to go through that list and think, what can I try to apply." From another instructor, "…I think I'm never going to be satisfied with what I do…I want to fine tune, and so I think that's the nature of a lot of teachers." Each adjunct faculty interviewed described efforts to become better instructors. Some described relying on trial and error to develop and refine teaching skills while others initiated efforts to solicit formative feedback from students to inform and implement changes prior to the end of the semester that would improve their effectiveness for that class.

Category 2: Challenges to Teaching Self-Efficacy

Theme 4: Challenges related to serving students. Issues related to serving students were most frequently mentioned challenges to teaching self-efficacy identified by adjunct faculty in this study. Adjunct faculty discussed the nature of the community college student body in which a wide range of abilities, knowledge, and experiences are represented within one classroom. Due to the breadth of this theme, it has been divided into three sub-themes:

Diverse student learners. The range of students' abilities and experiences that adjunct faculty must accommodate within in the same classroom was the most frequently mentioned challenge to teaching self-efficacy. Community college students are a diverse body of learners with some coming directly out of high school and who are not prepared for college level work, and others with a breadth of experience returning to change careers mid-life. Asked to talk about

this challenge in more detail, one adjunct faculty explained it is difficult to accommodate, "…the different backgrounds, different ages even, but more the backgrounds and the level of motivation."

Student behavior/motivation inside the classroom. Students' motivation in completing work and distractions in the classroom were also identified as challenges. An interview participant attributed this in part to students not knowing what they want to do after college. In the classroom, instructors struggle to find ways to help students not completing assignments. Asked to identify challenges related working with community college students, a fourth year instructor offered, "Helping students who are struggling – I can point them to the university resources which they mostly don't use…and I don't know what else to do." A veteran adjunct faculty shared the story of a particular student, "She shows up for class, so I can't drop her for lack of attendance, but she doesn't do her work and so I don't have much to grade there. …I can see the frustration in her and it is frustrating to me because I don't know how to reach her and help her."

Student behavior/motivation outside the classroom. Adjunct faculty reported observing that many students struggle to manage multiple commitments including jobs and family commitments. Many students have financial challenges. Further, distractions and obligations outside of the classroom make it difficult for students to succeed in the classroom. In the words of an adjunct, "That is the other thing about the community college student, is I realize that some or many are working adults, they are parents, they have family obligations, they have other classes, there's a lot going on."

Theme 5: Challenges related to working conditions. Multiple aspects of employment experiences at the College associated with the adjunct role were identified as challenges to teaching self-efficacy. There are six sub-themes within this larger theme.

Time. Adjunct faculty talked about the challenges of time management. This was discussed in the context of difficulty managing time for planning and grading outside of the classroom due to multiple commitments. Asked about challenges, an instructor summarized, "Time management is always top of my list." Another offered, "The biggest challenge is time. I don't have much of it since the pay is very low, and I have to teach a high volume of classes at many colleges to compensate for that."

Communication. Feeling out-of-the-loop in terms of communication at the College was identified as an area of challenge. For example, "I also feel as though communication is lacking towards adjunct faculty." Another explained, "Sometimes adjuncts can feel isolated with little oversight. Also, since we must use MACC email versus our standard email and everything is communicated through there, it requires special effort to check. We get so much unrelated or repetitive email to go through on that account that I dread checking it every day to look for my students' or departmental messages." Lack of communication was also evident as one of the instructors interviewed shared frustration that information from an adjunct evaluation process had not been shared.

Social integration and connection. From an interview, "I feel that we're interviewed for a position, hired, handed a packet of instructional materials, assigned a workstation and a classroom, then we have very little collegial interaction…we need more time together to discuss our concerns." This sentiment was echoed frequently. Limited time on campus and teaching during evening weekend hours were also discussed as factors that inhibit connections. Adjunct

faculty expressed the desire to have more opportunities to interact with full-time faculty and other adjunct faculty to share strategies and teaching resources. One explained, "I'm an adjunct so I don't know a lot of other instructors and it is a big campus and I teach at night…I will say at [MACC] I haven't found a lot of co-adjunct support."

Onboarding. A consistently identified area of challenge is the absence of a comprehensive onboarding or orientation process for new adjunct faculty. In the words of a new instructor, "I had a terrible first year working for MACC because expectations and policies were not explained. I have learned over the years but I feel there are still things I need to know." "…there is no new employee orientation so it was like, OK you're hired. You did great in the interview and when can you start? I walked in day one and was like, ok, we are going to do this with the students and where do you want me to begin, just go, and I'll make it work."

Inadequate pay/tenuous position. "Pay us more so that we feel valued and want to spend more time preparing for class and making the extra effort to reach out to struggling students" was a frequently heard sentiment. "Low pay results in low priority for me when thinking of improvements. If I'm short on time, I have trouble justifying 4-5 extra hours to redesign something or try something new when I get paid the equivalent of 10 dollars an hour already." Asked to identify a challenge to teaching, one instructor offered, "Anxiety about the tenuous role as a "part-time" instructor; anxiety about enrollment issues." Another explained at times, adjunct faculty do not feel valued or recognized for the role they play. To this, an instructor offered, "I enjoy my job however I would like to go full time faculty. Unfortunately I feel like that opportunity may not arise. I also feel like some of the full time faculty don't respect the role that adjunct faculty plays. I've been told I am paid well for the time that I put in however the reality is that I am on call 24/7 in order to provide the best environment for my

students and to be flexible to their schedules. I work extremely hard, as if I were a full time faculty member."

Theme 6: Challenges related to teaching skills. Adjunct faculty discussed lower levels of confidence in specific teaching skills.

Instructional skills. Discussing areas of lesser confidence, an adjunct faculty said, "It is one thing to have a degree saying you're qualified, it is another thing to come into the classroom and know you have absolutely no idea how to teach at the one-to-one student level." She continued on to say, "…I am still learning how to teach. I think you are always learning how to teach…I started with minimal support materials and I'm gradually building those support materials so I can bring in various assignments or in class writing or teaching tools." Another explained, "There is a need for courses that "…actually teach teachers how to teach." From a third, "My challenges are that I am new to instruction. In that, I am comfortable with course content, however, strive to hone my teaching skills."

Assessing student learning. Adjunct faculty specifically mentioned grading as an area of challenge. Instructors interviewed felt they had effective ways to judge whether or not their students were learning through activities and class participation, but identified the mechanics of grading as an area of lesser confidence. One said, "I'm still learning grading rubrics, still trying to find a good flow when it comes to grading documentation." Another explained, "I do find grading challenging – particularly because of the subject matter I teach, it is very subjective." "…as a teacher, am I grading fairly, am I grading right? I think I grade higher sometimes than I should, but I don't want to go too low, but am I inclined to go too high?"

Category 3: Teaching Self-Efficacy Supports

Theme 7: Services provided by the College. Convocation was mentioned most frequently. Adjunct faculty talked about connecting with colleagues and participating in departmental meetings as positive aspects of the convocation. One summarized, "There's never really a time to meet other faculty except at convocation." Another explained, "…it was awesome when the [academic] department, we got together in little cells, little clusters in specific courses we taught…and we were bouncing ideas off of each other." Many expressed the desire to see more workshops on instructional skills; "…more high quality workshops about effective instruction should be added," said one adjunct.

Theme 8: Support from personnel. Adjunct faculty identified a range of individuals at the College as helpful. Department chair most frequently mentioned source of support followed by mentor, usually a full-time faculty member. As evidence, "I think my department head, he has definitely been supportive with all of this, he has expressed his confidence in me to be able to do this job well." Administrators were mentioned as well, "My dean is very helpful, gave me plenty of suggestions for my career improvement, my department chair is very appreciative about my hard work and gives me lots of freedom and encourages me to do my experimentation with my teaching techniques." Interactions with full-time faculty were mentioned as mentors, sources of feedback about teaching, and sources of teaching resources/information.

Theme 9: College climate/environment. The positive and welcoming work environment was frequently mentioned. "MACC is a great place to work!" exclaimed an instructor. This environment extends to include instructors who have never even set foot on the campus; for example, "I love the MACC family because they make me feel welcome even as an online instructor. Someone is always there and willing to assist me with any questions I have,

and I feel like it is so much more than a typical community college." Another shared, "I have never felt like I had a 'work family' but at MACC I do."

Category 4: Sources of teaching self-efficacy

Variations in sources of teaching self-efficacy were evident comparing new versus experienced adjunct faculty. Themes for this category are organized according to experience.

Theme 10: Sources of efficacy for new adjunct faculty

Feedback. New adjunct faculty most frequently identified *feedback (social/verbal persuasion)* as exerting the most influence on their teaching self-efficacy. Sources of feedback included mentors and students. In the absence of formal feedback, some adjunct faculty initiated efforts to solicit feedback to inform their teaching decisions by creating mid-semester evaluations of teaching. Adjunct instructors also discussed informal interactions with students that boosted confidence in their teaching, "you are doing a good job!"

Teaching-related experiences. Prior teaching-related experiences including conducting workshops, leading groups, and providing in-service sessions and trainings were identified as helpful in promoting efficacy beliefs. An instructor with several decades of public speaking experience described teaching her first class, "I walked in and the first time I opened my mouth and I thought oh my goodness, I found my calling…I hadn't really put it all together looking over the years until I walked into a classroom and thought, gosh, I can see how I've been prepared for this for the last 20+ years." Each of the new instructors interviewed was able to identify instances of sharing knowledge with others from previous positions and/or experiences that provided a foundation of skills transferrable to a teaching setting.

Emotional experiences. New adjunct faculty identified a positive emotional state following a teaching experience as a source of efficacy. One stated, "Teaching is rad!" From

another, “It is a high!” A new instructor described how the students’ emotional energy influenced her teaching self-efficacy, “If I have a good class day and there’s a lot of positive energy and there’s excitement, then I’m an eight [10 = Completely confident]…I’m OK, I’ve done a good job today.”

Vicarious experiences. Building confidence in teaching skills through observing or learning from others’ teaching was also mentioned. Rather than mentioning instances of adopting teaching skills learned from observing others, this was discussed as a model of not what to do, but what not to do. From a first semester adjunct faculty, “There was another instructor that they [the students] had that…he was horrible…the first thing I said, you know, I am not that instructor.” Another instructor described her efforts to create an active, engaging classroom environment with opportunities for students to interact with each other as a direct contrast to other instructors that she perceived as relying solely on one-way transmission of information via lecture.

Theme 11: Sources of efficacy for experienced adjunct faculty

Mastery Experiences. Experienced adjunct faculty most frequently identified prior experience as the source of efficacy. Asked about how he built confidence in his teaching, an experienced instructor replied, “I have been teaching for 18 years. I’ve taught online and been a TA, I’ve taught courses in [my area of expertise]…a lot of experience.” A history of trial and error of different techniques in the classroom was also identified as a source of efficacy. From the same instructor, “I had a class where I realized I had made the midterm and final too hard…after that I came up with a different strategy for teaching the class that I planned the activities to build and prepare the students for more difficult activities.” Another source of teaching self-efficacy that falls under the theme of mastery experiences is other related

experience with pedagogical-type experiences. The 20-year teaching veteran who also holds multiple advanced degrees, explained, "…I do have a rather diverse background. I think that I get to bring in insights from different areas." Finally, an instructor who has been teaching for approximately five years described decades of public speaking, church groups, and running in-service meetings as preparation for a teaching career saying, "…I hadn't really put it all together looking over the years until I walked into a classroom and thought, gosh, I can see how I've been prepared for this for the last 20+ years."

Connected Mixed Data Analysis

A key part of the process for conducting mixed methods research is the integration of both quantitative and qualitative data through connected mixed data analysis (Creswell & Plano Clark, 2011). This process was guided by the fifth and final method-focused research question of the study, "In what ways do interviews with adjunct faculty explain selected data from the surveys." Qualitative data from the interviews served to explain, clarify, and complement quantitative data in several areas (Creswell & Plano Clark, 2011). In this section, data selected from the surveys for additional explanation is presented followed by how interview data extended an understanding of that area.

Areas of lesser teaching self-efficacy. Survey data indicated that of the three areas of teaching self-efficacy adjunct faculty scored assessing student learning as an area of lesser confidence. This was directly addressed in subsequent interviews. Adjunct faculty interviewed expressed confidence in their abilities to effectively evaluate whether or not their students were learning, but expressed struggles with grading practices. Not knowing how to create a grading rubric and doubts about assigning grades, "I hate grading and I still don't feel like I have a good handle on a good method on how to break it down."

Differences in teaching self-efficacy scores

Gender. Independent samples *t*-tests of survey items measuring efficacy indicated that females had slightly higher teaching self-efficacy beliefs in the areas of assessing student learning and instructional skills than males. This difference was small, and should be interpreted with caution due to the unequal number of males ($n = 55$) versus female ($n = 92$) survey respondents. A side-by-side review of interview data from males compared to females revealed one observable difference. Both male and female interview participants readily identified personnel they sought out in times of challenge, with questions, or if they needed support. However, male participants identified one or two individuals they called on for support such as a department chair or a faculty mentor. On the other hand, most females that were interviewed (four of five) described a wider network of supportive individuals that included department chairs, faculty mentors, and other full-time faculty. One described a network that extended beyond the College to include instructors from other institutions.

Years of higher education teaching experience. Survey data indicated that overall, adjunct faculty in the current study rated their teaching self-efficacy as high. Correlational analysis indicated that there is a small, positive relationship between years of experience and overall teaching self-efficacy as well as efficacy for instructional skills. Analysis of variance also showed that new instructors (less than five years of higher education teaching experience) had lower levels of teaching self-efficacy than more experienced peers. Interview data illuminated mastery experience as a key source of efficacy for long-time adjunct faculty. This is explored further in the next section.

Factors that influence teaching self-efficacy

Third, survey information did not provide adequate insights into factors that influence teaching self-efficacy. Survey data showed that overall, efficacy scores were high and although correlational analyses revealed a small positive relationship between both adjunct convocation and student evaluations of teaching and teaching self-efficacy. However, more information was needed about challenges and experiences and/or supports contributed to adjunct faculty's teaching self-efficacy beliefs.

Challenges related to serving students. In open-ended survey responses, issues related to serving students were most frequently identified as presenting challenges to adjunct faculty's teaching self-efficacy. Both survey and interview data were convergent in conveying this message. The two phases of data collection were merged to create a more detailed picture of what this means. Emerging from this mixing of the data, the key challenge resides in the nature of the community college student population in which there is a diverse range of student learners. Also, participants explained that the multiple outside pressures that community college students shoulder often detract from their academic performance.

Teaching support services provided by the College. Survey data indicated that both student evaluations of teaching (SETs) and convocation had small, positive relationships with teaching self-efficacy in the areas of instructional skills, creating a positive learning environment, and overall teaching self-efficacy. Of all of the teaching support services included on the survey, SETs and adjunct convocation touched the most participants (n = 145 for both) and had significant positive relationships with teaching self-efficacy. As evidence of support of the influence of student evaluations of teaching, in the interviews, new adjunct faculty revealed that student feedback was a key source of teaching self-efficacy. Data about convocation was

less clear. There was a mix of positive and negative feedback for the event. In the interviews, adjunct faculty explained that they liked the collegial aspect of the event and found value in meeting with others in their departments. New instructors found workshops provided at the event to be helpful, especially those on Blackboard, but more experienced adjunct faculty expressed the desire to see more workshops on instructional skills. A key source of teaching self-efficacy revealed in the interviews but not the survey data was the formal mentoring program offered by the College. On the surveys, only 38 adjunct faculty indicated they had participated in a formal mentoring relationship. In the interviews, the mentoring relationship was identified as a key source of both feedback and support in interviews with new adjunct faculty.

Meta-inferences Based on Mixed-Data Analysis

Through both open-ended items on the surveys and interviews, adjunct instructors were asked about actions that the college could do to enhance their teaching self-efficacy. Data from both were merged to create a new category with three themes. See Table 16.

Table 16

Summary of New Qualitative Themes Created Through Mixed Data Analysis

Category	Themes	Summary
5. Recommendations for the future from adjunct faculty	12. Connected and collaborative environments	Adjunct faculty expressed the desire to feel more connected with colleagues and to have more opportunities to engage with peers and full time faculty to share teaching resources.
	13. Trainings and professional development	Adjunct faculty offered suggestions for trainings/workshops including online formats, multiple, flexible times, and more offerings for sessions focusing on instructional skills.
	14. Different needs based on experience	In multiple areas, new adjunct faculty have different needs than more experienced peers.

Category 5: Recommendations for the future

Theme 12: Connected and collaborative environments. The need for increased opportunities to connect with other adjunct faculty and full-time faculty in the department was a key recommendation from participants. In addition to mentoring relationships, adjunct instructors expressed the desire to have increased informal interactions with full-time faculty and peers. This was viewed as a potentially effective way to increase teaching self-efficacy beliefs and gain wider exposure to teaching strategies and resources. An instructor explained, "The better you know the people around you the more likely you are to share teaching strategies, etc." Another suggested, "Perhaps grouping people together in support groups (instead of mentor relationships) to share teaching strategies."

Theme 13: Trainings and professional development. Ninety individuals indicated they had attended trainings/workshops provided by the college. In open-ended survey responses, adjunct faculty expressed the desire to attend more trainings and workshops. Both the format

and content of ideal trainings/workshops was explored in interviews. Adjunct faculty expressed the desire to have a more flexible range of options for attending sessions. Due to limited time on campus and the need to accommodate other commitments, availability of sessions on weekends and online was requested. From the surveys, "Consider the schedules of those of us that have full time jobs when planning training or meetings. More online training with flexibility would help." As to the content instructors would like to see offered, an instructor suggested, "More high quality workshops about effective instruction should be added." Sessions on building instructional skills and how to work with diverse student learners were also frequently mentioned.

Theme 14: Different needs based on experience. From the data, different needs for promoting teaching self-efficacy beliefs of new versus more experienced adjunct faculty emerged. New instructors were more likely to mention needs related to learning the logistics of course set-up, student progress systems, grading, expectations, policies, and procedures. A new adjunct faculty described the need for improved onboarding procedures and a manual/guide for policies and procedures saying, "I had a terrible first year working for MACC because expectations and policies were not explained." Experienced adjunct faculty expressed specific needs derived from long-term employment with the College. One shared the desire for revised pay structures depending on years of experience teaching. In his words, "…a better pay structure with increases for longevity would be nice." Priority in teaching classes based on longevity was also mentioned. Experienced adjunct faculty also advocated for a voice in decision-making, especially when selecting textbooks and/or course materials. This was frequently mentioned in open-ended survey responses, for example, "Every semester, the emphasis has been on getting new adjuncts acclimated and longer standing employees are rarely consulted." Both new and

experienced instructors advocated for training in working with a diverse range of student learners and help in developing instructional skills. See Table 17 for a complete summary of direct comparisons between survey and interview data.

Table 17

Mixed Data Analysis: Quantitative and Qualitative Merged Data Comparisons

Category	Theme	Survey data	Interview data
1. Adjunct faculty and teaching	1. Motivations for teaching	Responses to open-ended items. Both aspiration for full-time status and love of teaching were mentioned ten times each.	Adjunct faculty revealed motivations for teaching including aspirations to become full-time faculty and teaching for the love of the profession.
	2. Teaching strengths	Quantitative data showed creating a positive learning environment had highest mean score.	Creating a positive classroom environment was evidenced by descriptions of engaging and building relationships with students. Regarding communication, "I believe communication is one of the most important things."
		"Master the material you cover in class" and "Update knowledge of subject you are teaching" in top 5 items with highest mean scores.	"My content expertise is my greatest strength."
	3. Critically reflective practitioners	Individual survey item with lowest mean, "Employ methods that permit you to assess your own teaching." However, item "Reflect on teaching practices with the aim of making improvements" had mid-range mean score.	Adjunct faculty reflect on their teaching with the goal of making improvements and independently solicit feedback from students.
2. Challenges to teaching self-efficacy	4. Challenges related to serving students	Open-ended responses: Student-related issues were the most frequently mentioned challenge (approximately 70 times).	Wide range of student abilities, lack of preparedness for college, lack of effort/motivation, and multiple outside pressures for students all present challenges to teaching.
	5. Challenges related to working conditions	Open-ended responses: Time was the second most frequently mentioned challenge (mentioned over 30 times).	Effective time management, communication issues, not feeling connected or integrated into the College, lack of effective onboarding, inadequate materials, inadequate pay, and tenuous position with the College were identified as challenges.
	6. Challenges related to teaching skills	Quantitative data: Assessing student learning had lowest mean score followed by instructional skills. Item analysis also showed assessment	Instructional skills and assessing student learning were identified as areas of lesser confidence. Examples: "I am new to instruction." "I find grading

		items ranked lowest.	challenging."
3. Teaching self-efficacy supports	7. Services provided by the College	Quantitative data: Correlations revealed small positive relationships between student evaluations of teaching and teaching self-efficacy and adjunct convocation.	Convocation, mentoring, student evaluations of teaching, the adjunct evaluation process, and trainings/workshops were discussed.
	8. Support from personnel	Open ended responses. Department chairs, administrators, support staff were frequently mentioned.	Adjunct faculty identified multiple sources of support at the College with department chairs the most frequently mentioned, followed by support staff.
	9. College climate/environment	Open ended responses. Over 60 positive comments about MACC e.g. "This is a wonderful place to teach!"	Many adjunct faculty offered praise for the positive environment they experience working for the College.
4. Sources of teaching self-efficacy	10. Sources of efficacy for new adjunct faculty	Correlation: Student evaluations of teaching (feedback) positively correlated with teaching self-efficacy.	New adjunct faculty identified feedback as exerting the most influence on teaching self-efficacy followed by experience, emotional experience, and vicarious experiences.
	11. Sources of efficacy for experienced adjunct faculty	Quantitative data: Correlations indicated there is a positive relationship between teaching self-efficacy and experience. Those with 0-5 years experience had lower efficacy scores than those with 6+ years experience.	Experienced adjunct faculty identified accumulated teaching experience as the most significant contributor to teaching self-efficacy followed by feedback.
***New category based on mixed data analysis from both surveys and interviews**	12. Connected and collaborative environments	Adjunct faculty expressed the desire to feel more connected with colleagues and to have more opportunities to engage with peers and full time faculty to share teaching resources. Increased informal opportunities for interaction were also identified as helpful in building connections and sharing teaching strategies/resources.	
5. Recommendations for the future	13. Trainings and professional development	Adjunct faculty offered suggestions for trainings/workshops including online formats, multiple, flexible times, and more offerings for sessions focusing on instructional skills. "Offer/require more traditional training in pedagogy for those who have never been schooled in lesson planning, essential questioning, and test construction."	
	14. Different needs based on experience	Adjunct faculty have different needs based on their levels of experience. Examples include revised pay structures, preferential course assignments, having a voice in textbook and curricular decisions and training in more advanced learning-related theories/topics for more experienced adjunct faculty. Newer adjunct faculty need more guidance in course set-up, policies, procedures, building teaching resources, and expectations.	

Chapter Five: Discussion

The mixed methods design and single institution setting of this study led to valuable insights into the teaching self-efficacy beliefs of part-time faculty. Although many studies have focused on adjunct faculty's working conditions and job satisfaction, little is known about their beliefs as educators. This study represents a significant step forward in advancing knowledge in this area. Findings from both quantitative and qualitative phases of data collection have been merged to form an overall view of adjunct faculty's teaching self-efficacy beliefs and draw meta-inferences about the factors that influence those beliefs. In this chapter, adjunct faculty's perceptions of their teaching self-efficacy will be discussed, interwoven with the sources of those beliefs (Bandura, 1997). Next, personal and contextual factors that influence beliefs, challenges to teaching self-efficacy, limitations of the current study, suggestions for future research, and conclusions/recommendations will be presented.

Adjunct Faculty's Teaching Self-Efficacy Beliefs

Overview. Adjunct faculty at MACC rated their teaching self-efficacy as high. This was evident in both survey scores and in subjective ratings of confidence shared by interview participants. Many of the instructors in this study were experienced educators with an average of nine years of higher education teaching experience. Only 11% of adjunct faculty surveyed indicated they had no prior formal training in teaching. Adjunct faculty reported a range of motives for teaching and many identified not just one, but multiple reasons for choosing to teach part-time including aspiring to become full-time faculty and teaching part-time in addition to a

full-time job. Love of teaching and finding their roles as instructors as personally rewarding were frequently mentioned as sources of motivation. This is consistent with previous studies of adjunct faculty (e.g. Allison et al., 2014). The volume of data generated by open-ended survey responses indicated that adjunct faculty were eager to share their thoughts about the factors that influenced their teaching confidence.

The current study provided important information to inform future use of the College Teaching Self-Efficacy Scale (Prieto Navarro, 2006). The instrument is a highly reliable tool for measuring college faculty teaching self-efficacy and effectively captures relevant elements of college teaching. To date, use of this instrument has been limited and the current study represents important progress in validating its use. The CTSES was modified for use in the current study. Only items focusing on teaching self-efficacy beliefs were used. The section addressing instructional behaviors was omitted. Other items deemed redundant and/or not applicable were also deleted. Demographic items, questions related to contextual factors, and open-ended items were added (See Appendix A). Based on data generated by the modified version of the CTSES used in the current study, factor analyses revealed that teaching self-efficacy could be assessed in three specific pedagogical areas (factors): instructional skills, creating a positive environment, and assessing student learning. Comparing the current study to one of the few published studies in which the CTSES was the instrument used to measure teaching self-efficacy, two of the factors that emerged from the survey data, instructional skills and creating a positive environment were consistent with those found in DeChenne and colleagues' (2012) study of graduate teaching assistants. The third factor that emerged, assessing student learning, was unique to this study. However, this area did emerge as a factor in other studies of full time faculty teaching self-efficacy using similar instruments (e.g. Chang et

al., 2011; Fives & Looney, 2009). The reduction of the data into three factors created the opportunity to learn more about adjunct instructors' beliefs in specific pedagogical areas. This specificity would have been lost if only attending to efficacy scores at the global, overall level.

The nature of the instrument used in this study should be mentioned as a possible factor in the high scores for teaching self-efficacy. With the modified version of the CTSES (Prieto Navarro, 2006) used in the current study, survey participants were asked to "Rate your confidence in your ability to…." When asking individuals to subjectively rate their confidence, there is a risk of social desirability response bias, meaning that individuals might rate themselves higher to boost the appearance of competence. This is a potential limitation of instruments used to measure self-efficacy and was a known risk of selecting the instrument for use in the current study. Measures suggested by Bandura (2006) to "reduce social evaluative concerns" such as ensuring the confidentiality of responses and reminding participants of the importance of their participation were put into place to reduce this risk (p. 314). In this study, a sufficient range of responses was obtained to reveal notable patterns in how adjunct faculty at MACC perceive their teaching self-efficacy.

Areas of higher teaching self-efficacy. Creating a positive classroom environment emerged as an area of perceived strength in both the surveys and interviews with adjunct faculty. Of each of the areas explored, creating a positive learning environment had the highest mean score. Analyzed by years of teaching experience, this area had the highest mean score for adjunct faculty with less than 10 years of teaching experience. Based on individual item analysis, a key element of creating a positive classroom environment, showing students respect through actions, also had the highest mean score above all other survey items. Also as part of creating a positive environment, in interviews, instructors shared feelings of satisfaction that

accompanied instances of supporting discouraged students, helping them to build confidence, and seeing them succeed. As another example of creating a positive and supportive classroom environment, an instructor articulated the need to convey to all faculty "…the importance of relationship building with the students and the negative impact of an ineffective instructor on the student's college success." Communication with students both inside and outside of the classroom also emerged as an area of perceived strength. A veteran adjunct faculty explained, "I believe that communication is one of the most important things in my class." These findings are consistent with areas of perceived efficacy that emerged in previous studies of full-time faculty (Chang et al., 2011; Mehdinezhad, 2012). Adjunct faculty provided several examples of time and effort devoted to making themselves available to students outside of the classroom both in-person and responding to student emails and calls. For example, "…this is secondary employment, I have never had email on my phone until I started working here so it goes off all night long…I'm on my phone trying to answer students' emails and things like that." Both quantitative and qualitative data in the current study provided evidence that adjunct faculty perceive promoting a positive classroom environment as an area of strength. However, this is not the only perceived area of strength that was identified.

Moving to the second pedagogical area explored in this study, instructional skills, it is important to note that instructional skills is a broad area that encompasses a wide range of teaching skills. This area encompassed 16 items including planning, preparing, self-evaluation, developing teaching skills, and content mastery. By years of experience, instructional skills edged out creating a positive learning environment as the top rated area for adjunct faculty that had taught for over ten years. Though the difference was slight, this hints at the cumulative effect of teaching experience in promoting teaching self-efficacy beliefs for instructional skills.

Of these skills, adjunct faculty in this study identified content expertise as an area of strength. This was evidenced by survey item analysis (two of the three individual items with highest mean scores addressed content mastery) and was reflected in interviews with adjunct faculty. Perceptions of content mastery were influenced by both professional expertise and number of times the instructor has previously taught the class. Previous research has also shown that adjunct faculty often perceive this as an area of strength while other skills related to teaching are viewed as more challenging (Pompper, 2011). In the same category of instructional skills, instructors revealed feelings of lesser confidence in specific skills.

Areas of lesser teaching self-efficacy. A consistent message conveyed throughout the study was the desire to have more training in "teaching skills." This echoes the findings of previous work in this area (Allison et al., 2014; Dolan et al., 2013; Christensen, 2012). When interviewed, a third year instructor succinctly articulated this need saying, "I would like to see courses that actually teach teachers how to teach." Asked to rate her confidence in her teaching on a scale of 1= Not at all confident to 10 = Completely confident, this instructor rated her confidence in her teaching as a 9.5 and identified her content expertise as her biggest area of strength. However, she argued that this is not enough when it comes to being an effective teacher. She said, "There's always something to learn, there's the biggest challenge, you can be the smartest person in the room and you know the material, but you have to be able to convey it to your students in a way that they can understand and they can absorb the information." Several other adjunct faculty in the study echoed this. It also brings to mind Morris and Usher (2011) in which a full-time faculty described this as "…this bridge between mastering the content and being able to *teach* the content" (p. 239). Ways to make content relevant, keeping students engaged, and developing teaching skills were key areas of lesser confidence that emerged from

both surveys and interviews. These are key skills that are associated with high quality instruction (Bain, 2004; Roueche, Roueche, & Milliron, 2003). Without confidence in these skills, adjunct faculty's ability to employ them in the classroom and subsequent student learning may be affected.

Of the areas measured, assessing student learning had the lowest mean score indicating that this was an area of lesser confidence among adjunct faculty in this study. This was also evident based on an analysis of individual items that revealed three of the five items loading onto the assessing student learning factor were in bottom ten survey items based on mean scores. This finding is in line with Chang et al. (2011) who also found that assessing student learning received lower teaching self-efficacy scores among full time faculty. In the interviews, adjunct faculty were asked to share their thoughts about their confidence in this area. Interestingly, when asked directly if they viewed "assessing student learning" as an area of challenge, most said "no." Rather, they voiced struggling with creating tests, grading practices, and grading fairly. Pressed to clarify the distinction between assessing student learning and grading, adjunct faculty explained they employed multiple methods throughout the semester to evaluate their students' learning. In-class discussions, exercises, and activities were offered as evidence gathered to assess students' learning. These methods can be categorized as formative assessments of learning. Returning to the survey, the item "Use formative assessment to gather information about students' academic progress" loaded onto the factor instructional skills not the assessing student learning factor. This is an interesting finding and supports the idea that instructors may intuitively view using formative assessment methods throughout the semester as an instructional strategy to advance student learning (Cauley & McMillan, 2010). When it comes to summative techniques such as deciding on evaluation methods, creating tests, and grading students'

academic capabilities that were captured by the assessing student learning factor, perceptions of efficacy were weaker. Asked what topics they would like to see addressed in future trainings/workshops, these summative skills were frequently mentioned. When interviewed, a third year instructor shared a relevant example saying, "I know sometimes I give my students a quiz…they said you have to use the one that came with the book, I was like, they're just reading the book and answering the questions. That doesn't really tell me if they've learned anything, that just tells me they know how to read." She further explained, "…there needs to be a better way of accurately measuring if the student actually learns." This was described with frustration as an instance of assessing student learning in which she knew the instrument in place was lacking, but did not know how to create a more effective method or tool for assessment. This is an important piece of evidence to consider vis-à-vis Baldwin and Wawrzynski's (2011) finding that adjunct faculty are less likely to use effective learner-centered assessment strategies than full-time counterparts. It would be beneficial for future work in this area to more deeply explore instructors' understanding of "assessing student learning" and terms such as summative and formative in the context of assessment. Given the lack of specific training in this area for not only adjunct faculty, but also for many who teach in higher education, it may be illuminating to draw attention to the understanding of assessment and use of related terminology.

Adjunct faculty as critically reflective educators. Asked to rate their confidence in their overall teaching abilities, adjunct faculty in the interview phase of this study rated their confidence as high with the caveat they believed they still had opportunities for growth and improvement. This theme of engaging in critical self-reflection with the goal of making improvements to teaching was evident in each of the interviews. Dolan et al. (2013) found similar patterns of critical self- reflection and desires of building competence in teaching skills

among adjunct faculty surveyed in the Maryland community college system. In any educational environment, active and critical reflection is an essential element of high-quality teaching (Brookfield, 2015). Interestingly, item analysis revealed that "Employ methods that permit you to assess your own teaching" had the lowest mean score of all individual survey items. However, the item "Reflect on teaching practices with the aim of making improvements" was rated in the top half of items. This may indicate that instructors reflect on their teaching but are slightly less confident about regularly using specific techniques to assess their effectiveness. A clearer picture emerged from talking to adjunct faculty one-on-one.

Adjunct faculty described multiple ways in which they actively review personal teaching practices to assess what techniques and practices have been well received by students and those that have been less effective. The sources of teaching self-efficacy described through this process of critical self-reflection ordered from most influential to least were: (a) mastery experience, (b) student feedback, (c) emotional experiences, and (d) vicarious experiences. Describing the combined influence of mastery experiences and feedback, in an open-ended survey response an adjunct instructor explained, "It has been a learning process and I have changed how I teach a lot in the seven years I have been doing it. For many semesters I would totally alter my classes each time trying to find an effective way to teach. This was based on student feedback and my own experience." The individual described engaging processes of "trial and error" to advance content delivery and assessment of learning.

Interviewees provided additional examples of the interplay between experience and feedback. An instructor described a running list she created called "Improvements" that she added to as ideas emerged over the course of the semester of teaching. She explained the process of reviewing the list, selecting feasible modifications to make, and integrating them into planning

for the next semester. Asked, "How do you come up with items for your list?", she replied, "Sometimes things just pop in my head and I think that also comes from doing it multiple times…. It is also my evaluations. I do midterm evaluations which are all my doing." She continued on to explain that if students offered "workable" suggestions, she attempted to integrate those changes before the end of the semester. This is but one of several examples of self-initiated efforts to solicit feedback with the goal of improving teaching that emerged in this study. This formative feedback allows adjunct faculty to implement changes within the semester rather than waiting for the summative end-of-semester student evaluations of teaching provided by the College. This provides further evidence of the relationship between experience and social persuasion (in the form of feedback) as sources of teaching self-efficacy and subsequent instructional decisions. Self-initiated efforts to solicit feedback, critical self-reflection, and the desire to become better teachers shared by adjunct faculty in this study parallel findings from Christensen's (2012) study.

Reflecting on personal emotional reactions and those of students also influenced adjunct faculty's teaching self-efficacy. A new instructor in her third semester of teaching described both sides of this process. She described a fluctuation in her teaching confidence based on "good days and bad days." In her words, "As I try new things, I can just see where it's a total bomb, and it's just blank stares and they are looking back at me and I know that it is just not working and then they come and say we're confused, we don't understand and I know it is because I didn't do a good job of explaining it." She further explained, "It is a feeling after class, it is a feeling during class, you can feel the ebb and flow of positive and negative energy and I can walk out of here saying, I did a good job or I can walk out and say, I can't do that again." Asked to talk about feelings that accompanied a good day, she beamed as she described feelings of

euphoria, "…it's a high!" Reflecting on emotional experiences vis-à-vis teaching emerged as an important source of teaching self-efficacy and a spark for igniting efforts to improve teaching. Morris and Usher (2011) found similar reactions to positive affective states among full-time faculty. Feeling energized by successful teaching experiences serves as both a source of increased teaching self-efficacy and of motivation to persist in teaching.

Finally, evaluating and choosing teaching behaviors based on comparison to other instructors was also a self-reflective practice in which adjunct faculty engaged. Categorized as a vicarious experience, according to Morris and Usher (2011), this can manifest in two ways: (a) "Learning pedagogical skills by observing models" and (b) "Comparisons of oneself to others or to group norms" (p. 238). Adjunct faculty in this study did not mention developing skills by watching other faculty, rather, comparisons to others as a source of teaching self-efficacy was evident. For example, a new instructor described making instructional decisions that would differentiate his teaching from one of his own previous instructors he described as "horrible." His personal experience in the classroom as a student with an instructor he perceived as ineffective provided motivation that shaped his behaviors and interactions with the students in his classroom. A five-year veteran shared a similar experience. She descried how she planned her classes and developed an interactive and engaging teaching style based on comparisons with other instructors who solely relied on lectures as their method of content delivery. There was evidence to support the contention that adjunct instructors in this study are critically reflective educators that review, compare, and adapt their teaching practices in efforts to meet the learning needs of their students. This played a role in influencing teaching-self efficacy beliefs, as did a number of additional personal and contextual factors identified in this study.

Factors that Influence Adjunct Faculty's Teaching Self-Efficacy

Given the mixed method design and single institution setting, it was possible to pursue an in-depth exploration of the multiple factors that influence adjunct faculty's teaching self-efficacy at MACC. Experience emerged as the most significant contributor to increased teaching self-efficacy beliefs in this study. Among those with fewer than five years of experience, feedback was highly influential. However, these are not the only sources of efficacy beliefs, and a number of differences were found based on personal factors and contextual experiences. These findings are discussed in the following section.

Personal Factors that Influence Teaching Self-Efficacy

Years of higher education teaching experience. Previous mastery teaching experiences emerged as the most significant source of teaching self-efficacy for adjunct faculty with more than five years of higher education teaching experience. This is consistent with most literature in this area of study (e.g. Bandura, 1995; Tschannen-Moran et al., 1998; Prieto Navarro, 2006; Morris & Usher, 2011). Tschannen-Moran and Woolfolk Hoy (2007) described mastery experiences that accrue over time as the strongest predictor of teachers' efficacy beliefs. Although this has not previously been explored for adjunct faculty, Morris and Usher (2011) found this to be true for full-time faculty. As one builds a history of successful teaching experiences, confidence in one's ability to do so in the future also grows.

Adjunct faculty in this study had a wide range of teaching-related background experiences and the average adjunct in this study had been teaching in higher education for approximately 10 years. Three groups were created to explore differences in teaching self-efficacy based on years of higher education teaching experience: (a) 0-5 years of experience, (b) 6-10 years and (c) 11+ years. Consistent with the majority of research on teaching self-efficacy beliefs, instructors with fewer than five years of higher education teaching experience had lower

levels of teaching self-efficacy compared to those with more than six years of experience.

No statistically significant differences were found between those with six to 10 years and those with 11 or more years. Further correlational analysis provided additional evidence to support the relationship between teaching self-efficacy and experience showing that efficacy beliefs increase with years of experience. Tschannen-Moran and Woolfolk Hoy (2007) described mastery experiences that accrue over time as the strongest predictor of teachers' efficacy beliefs. They also concluded that newer teachers have other experiences that contribute to their self-efficacy. With a more shallow pool of experience from which to draw, adjunct instructors with less than five years of experiences identified other sources of teaching self-efficacy. First, newer instructors explained that prior teaching-related experiences had helped prepare them to be instructors of college students. Whether teaching high school, facilitating church groups, conducting corporate trainings, or tutoring, each adjunct interviewed was able to identify some element of those experiences that was transferrable to their current teaching role.

Gender. In this study, females had slightly higher levels of teaching self-efficacy than males in the areas of instructional skills and assessing student learning. No differences were found between males and females in creating a positive classroom environment or overall teaching self-efficacy. These differences should be considered with caution given that the majority participants were female and there is increased risk of finding a difference when none actually exists when the number of participants is unequally distributed between groups (Field, 2009). However, similar differences have been found in previous studies of full time faculty (e.g. Chang et al., 2011; Fives & Looney, 2009). Previous researchers who observed higher teaching self-efficacy scores for female over male faculty postulated that socialization practices could play a role in this difference (e.g. Chang, et al., 2011; Fives & Looney, 2009). It has been

argued that there is a shared "…understanding of the role of teachers in society and the socialization practices that allow for women to more closely align themselves with this work" (Fives & Looney, 2009). This notion was not directly explored in the current study. Differences in teaching self-efficacy based on gender do not appear to be influenced by the discipline the adjunct faculty teaches as an analysis of covariance did not yield statistically significant results in overall teaching self-efficacy beliefs nor in instructional skills, creating a positive environment, and assessing student learning.

Qualitative data from the interviews did reveal a subtle difference in patterns of support seeking between males and females. It is important to clarify that both males and females who were interviewed were open to seeking assistance. Asked to identify sources of support, females described networks of multiple individuals they would call on with questions, to share ideas and teaching resources, or for information when needed. For example, the third-semester instructor described actively seeking and meeting with a network made up of multiple individuals from outside of the College with shared teaching experiences. This network was an important source of support for her. Males, on the other hand, named one or two individuals as sources of support rather than a wider network. Due to the small sample, this observation should be interpreted with caution. Social networks take time to develop and two of the male instructors interviewed had fewer than three years' experience at the College. A search of the literature on support networks for faculty in higher education yielded few results indicating this is an area ripe for additional work. Baker-Doyle (2011) has produced insightful work in this area exploring how K-12 teachers develop social support networks but did not mention gender as a factor in networking patterns, rather differences were attributable to several other factors including new versus experienced teachers, individual styles of socialization, institutional culture, and

availability of support personnel. This work provides a good starting point for extending this research into higher education.

Academic Discipline. Previous researchers have found higher levels of teaching self-efficacy among School of Education faculty in comparison to other academic areas (Mehdinezhad, 2012; Chang et al., 2011; Fives & Looney, 2009). This academic area is not represented at the college in the current study. No differences in teaching self-efficacy were found based on academic discipline taught. Additional analysis of covariance was conducted to explore whether the combination of gender and academic discipline influenced teaching self-efficacy. No statistically significant differences were measured based on the interaction between both gender and discipline. The range of disciplines taught at this, and many other community colleges, added both intrigue and challenge to this study. There are many applied occupational (not traditionally academic) disciplines taught. This diversity of academic disciplines was captured in both phases of data collection, but the majority of survey respondents represented traditional academic disciplines such as English, humanities and social sciences, mathematics, and natural sciences. In the first phase of data collection, unbalanced representation of respondents in each of the academic disciplines was a limitation. In the second phase, interview participants were purposefully selected to include instructors from both traditional academic and occupational degree tracks. Upon first glance, one might wonder about commonalities between an English instructor and one teaching an occupational-focused class such as welding. Not surprisingly, differences are readily apparent. For example, their final assignments look very different! However, similarities abound. Across interviews and disciplines, instructors shared common teaching concerns such as ways to convey content effectively, helping struggling

students, and grading practices. All expressed passion for the generative aspect of teaching from which they derived feelings of reward and satisfaction in passing knowledge on to their students.

Other demographic variables. No statistically significant differences in teaching self-efficacy were found based on race/ethnicity, teaching format, of highest degree. In this study, there was an unequal distribution of participants in each of these variables. There was a disproportionately high representation of White adjunct faculty with Masters degrees that teach in the classroom. This inequality may have masked any possible differences; however, no significant differences were found in previous research exploring the teaching self-efficacy of other higher education educators (full-time faculty) based on these variables (e.g. Fives & Looney, 2009). It is also of note that the sample was an accurate representation of the overall population of adjunct faculty at MACC.

Contextual Factors that Influence Teaching Self-Efficacy

Quantitative data and open-ended responses from surveys and qualitative interview data were merged to form an understanding of the multiple contextual factors that influence MACC's adjunct faculty's teaching self-efficacy beliefs. Teaching support services provided by the College, social integration and support, college climate, and challenges based on context emerged as exerting varying degrees of influence and are discussed in this section.

Teaching support services provided by the College. MACC offers several teaching support services. Exploring the relationship between adjunct faculty's teaching self-efficacy and teaching support services provided by the College was enlightening. These include mentoring, a comprehensive adjunct evaluation process, trainings and workshops, a yearly convocation meeting, and access to student evaluations of teaching. Adjunct faculty's perceptions of the degree to which each of these influences their teaching self-efficacy differs, but this study showed that receiving feedback about their teaching is a common factor that they find helpful

across the services provided. This emerged from both survey and interview data. The element of convocation that was identified as most helpful was the time set aside to meet with departmental colleagues. Adjunct faculty expressed they value the collegiality and opportunities to share teaching ideas during these gatherings.

Student Evaluations of Teaching (SETs). Of the teaching support services included in this study, student evaluations of teaching were the highest predictor of efficacy for instructional skills, creating a positive classroom environment, and overall teaching self-efficacy. Most of the adjunct faculty in the study indicated that they had received student evaluations of teaching at some point in their time at the College. According to Bandura (1997) social persuasion, of which feedback is a key form, is an important source of efficacy beliefs. Previous research has explored the dual role of student evaluations. Student feedback serves both summative and formative purposes. As a summative tool, evaluations are associated with assessing performance (Emry et al., 2003; Ory, 2000). Yao and Grady (2005) explained that the ultimate purpose of evaluation should be formative and should directly lead to the improvement of teaching. They explained, "The formative use of student evaluation by faculty members to improve their teaching is imperative given that most faculty members have never received any formal training in pedagogy when they started their teaching career" (p. 5). A fourth year instructor summarized her perception of SETs, "…[student] feedback would definitely be a factor in the confidence thing…. If they say that I am doing well, then I know I must be doing ok." Further, she described the confidence boost she felt noting the positive progression of her evaluations as a reflection of the evolution of her skills across her four years of teaching.

Convocation. Although the relationship was small, attending convocation also predicted overall teaching self-efficacy in the areas of instructional skills and creating a positive learning

environment, but not for assessing student learning. Convocation is a required event and most adjunct faculty in the study reported they had attended the meeting. Instructors' views on convocation were mixed. The sense of collegiality and shared sense of purpose derived from gathering with colleagues was praised. Adjunct faculty expressed they valued time at the meeting devoted to meeting with other instructors and with colleagues in their department. This is one of the few times during the academic year that both full time and adjunct faculty meet together to discuss departmental issues. One stated, "I learn the most when meeting with colleagues regarding how they are dealing with students/situations and how they are creating materials." New adjunct faculty reported that workshops offered during convocation, particularly those focused on using the online learning platform Blackboard, were helpful. They also expressed the desire to see more workshops on teaching skills offered. An overarching theme that emerged was the perceived need to "…make convocation more useful." There is a notable absence of research in the higher education literature that specifically explores the influence of this type of event.

Formal mentoring relationships. On the surveys, of each of the services, the fewest adjunct faculty indicated experience with a formal mentoring relationship (38 out of the 159 participants). The formal process of pairing of a new adjunct faculty with an experienced full-time faculty has gained momentum only in the past five to seven years. Seventeen of the 38 adjunct faculty that reported they had experienced a formal mentoring relationship with a more experienced faculty had fewer than five years college teaching experience. Not every new instructor is paired with a mentor, for example, those with previous teaching experience are not automatically paired, and implementation of the service varies by academic department. Although it did not emerge as a predictor of teaching self-efficacy beliefs from survey data,

mentoring was rated the highest of the teaching support services (M = 4.50) and multiple interview participants shared that their mentoring relationships with a more experienced full-time faculty member at the College was a key source of support and confidence in teaching skills. This is line with the findings of Garman, Wingard, and Reznik's (2001) study in which the self-efficacy beliefs of novice medical faculty increased after participation in a mentoring program. One element of the mentoring relationship, the classroom observation, was cited as particularly helpful. The feedback received from the mentor after he/she had visited the class was a key source of teaching self-efficacy for new instructors. The importance of contextual factors such as support and feedback in influencing teaching self-efficacy for new instructors demonstrated here is consistent with related work in K-12 settings (Tschannen-Moran & Woolfolk Hoy, 2007).

Adjunct faculty evaluation process. Adjunct faculty are evaluated during their first semester of teaching, once during the second year, and subsequently every two years or as designated by supervisor or division administrator. These comprehensive evaluations include classroom observations, student evaluations of teaching, and reviews of administrative compliance. Based on survey data, the adjunct faculty evaluation process was not found to predict teaching self-efficacy. This may be due to several factors. First, this is a relatively new process, implemented three years prior to this study, with multiple moving parts. Evaluating newer adjunct faculty is a priority in the process and some long-term adjunct faculty may not have been evaluated yet. An instructor in her fifth year of teaching at the College said, "I've never had anybody come in my classroom the whole time I've been here…I'm surprised that no one has been in…." Also, open-ended survey responses pointed to lack of communication of evaluation feedback as a possible issue for some. From the surveys, "I would like to see my adjunct evaluation" another reported, "I never received any information about my evaluation."

As a final point, the perceived importance of the evaluation process and hunger for feedback is evident in the following survey response: "I thought that it was helpful, but I had to request that the evaluation be completed. My first semester was almost over, and no one had scheduled an evaluation so I asked for one. I'm not confident that everyone is being consistently evaluated." Based on survey data, it appears that there are inconsistencies in the implementation of the evaluation process that may hinder effectiveness.

Interviews with adjunct faculty filled gaps in understanding how the evaluation process influences teaching self-efficacy. Four of the nine adjunct faculty interviewed had been evaluated. An instructor in her third semester of teaching shared that feedback from process, especially from the observation of her teaching, was helpful in increasing her confidence. She said, "I had an in-class evaluation last fall and I received feedback from that and just to give one or two areas that I can focus to improve was really helpful." This was also true of the veteran instructor who teaches solely online. He described the apprehension he felt as his online class was observed but recognized the necessity of the process and found the feedback he received to be valuable. Based on this evidence, feedback generated by observations of teaching is helpful for both new and experienced adjunct faculty and this form of social persuasion was an important source of teaching self-efficacy (Bandura, 1997).

Trainings and workshops. The positive relationship between engaging in professional development and teaching self-efficacy has been previously demonstrated (DeChenne et al., 2012). In the quantitative phase of the current study, trainings and workshops offered by the College did not emerge as predictors of teaching self-efficacy. However, adjunct faculty shared thoughts on trainings they have found helpful in increasing their confidence in specific areas and participation in trainings. Of the sessions offered, trainings focusing on the online learning

platform Blackboard were the most frequently attended and identified as helpful. Adjunct faculty also expressed benefiting from attending trainings addressing instructional skills. For example, from the surveys, "The training introduced me to several activities that I started using in my own class," and "I am exposed to new techniques at training sessions." They expressed the desire to have more opportunities to develop instructional skills saying, "…more high quality workshops about effective instruction should be offered." The benefits of these trainings would directly impact students' learning experiences. Research has demonstrated the link between faculty engagement in professional development and student performance. Rutz et al. (2012) found that faculty engagement in professional development sessions focusing specifically on instructional skills had a positive influence on student academic performance. In addition to building teaching confidence, research has also shown that engaging in professional development promotes feeling like valued members of the institution (Diegel, 2013). As a challenge in this area, adjunct instructors explained that due to limited time on campus and scheduling conflicts they are often not able to attend as many sessions as they would like. Instructors offered several suggestions. First, they explained the need for flexible scheduling and multiple options including sessions outside of the typical workday hours that would increase opportunities to attend. From the surveys, "Consider schedules of those of us that have full time jobs when planning training or meetings. More online training with flexibility would help." Also, having a dedicated center for teaching that adjunct faculty could utilize for teaching support would provide an additional source of teaching resources and pedagogical knowledge.

Support and Social Integration

According to Gappa, Trice, Leslie (2005), collegiality and involvement are essential elements of faculty work for both full time and part time educators. For institutions to function

effectively, all faculty, including adjunct faculty need to feel connected and integrated in their work environments. Cipirano and Buller (2012) echoed this positing that collegiality as evidenced by connection and working together toward a shared purpose is a "cornerstone" of professional work in higher education. Increased opportunities for socialization and collegiality can also help to facilitate common expectations for teaching and a sense of professionalism (Fives & Looney, 2009). Findings discussed in this section complement Kezar's (2013) exploration of adjunct faculty's social constructions of their work environments. On the topic of support in the current study, some adjunct faculty shared complimentary words whereas others voiced complaints saying there is "little to no support" for adjunct faculty. This could be attributed to multiple factors: (a) contextual dependency, meaning that adjunct faculty's experiences differ greatly based on department and (b) communication. There may be opportunities available that adjunct faculty do not know about due to disrupted or lack of communication. Overall, there was a large amount of evidence from both open-ended survey items and interviews that many MACC adjunct faculty are able to identify one or more sources of support.

Department chairs were the most frequently mentioned sources of individual support. This is consistent with Diegel (2013) who described department chairs as an important source of support and the primary point of contact and communication for adjunct faculty teaching in their departments. As Diegel explained, department chairs play an important role in creating mentoring matches, and adjunct faculty must also take initiative to reach out and request a mentor if that support is needed. Department chairs also play an important role in setting the tone for the climate of the departments they oversee (Kezar, 2013). Setting a climate that is

inclusive and engages both full and part-time faculty will build a foundation for a supportive environment.

In addition to department chairs, full-time faculty were mentioned as a source of support; from an open-ended survey response, "…the full-time faculty are supportive and responsive when you ask for help." According to instructors in this study, full-time faculty mentors play an important support role that help to promote their teaching self-efficacy. Adjunct faculty also described informal interactions with full-time faculty in which they are able to share teaching resources and share instructional strategies as beneficial and expressed the desire to have increased opportunities for interaction. These informal interactions are important elements of increasing feelings of connection and collegiality (Diegel, 2013). Informal mentoring relationships are an additional benefit of increased interactions (Kezar, 2013).

Finally, adjunct faculty also identified support staff within the department as important sources of support. Administrative assistants and other support staff are often the primary point of contact for adjunct faculty and the ones that provide support, access to materials, facilitate communication, and help with administrative issues. The importance of support staff cannot be overlooked. They provide a vital link connecting adjunct faculty to their departments. Previous research involving full-time faculty supports this notion as Rosser (2004) found that administrative support is an important part of the work life of faculty. Interestingly, fellow adjunct instructors at the college were not identified as a source of support in this study; many instructors explained they have little interaction with their peers, usually limited to the yearly convocation meeting. Two adjunct faculty explained that they act as mentors, taking less experienced instructors "under a wing," and one described a social support network that included peer instructors from other institutions.

In terms of adjunct faculty's social integration into the college, they expressed feeling a sense of cordiality and know there are sources of support to approach with questions or for information. However, opportunities for connection and collegiality are perceived as limited. Adjunct faculty expressed the desire to have more opportunities to connect with others in their department to share teaching resources and discuss teaching strategies. Feelings of isolation and not feeling like members of the community were also shared. This was attributed to limited time on campus, lack of opportunities to participate in full-time instructor meetings, and feeling voiceless in curriculum and selection of course materials decisions. Feelings of isolation were augmented among those teaching after hours and/or on weekends. One of the identified benefits of increased support via social connections directly related to teaching self-efficacy beliefs by adjunct faculty in this study is the sharing of teaching resources. They expressed the desire to have more opportunities to bounce off ideas, discuss effective teaching practices and ask for materials that others have used including syllabi, tests, and lecture materials with both other adjunct faculty and full time faculty. A survey respondent suggested, "Perhaps grouping people together in support groups (instead of mentor relationships) to share teaching strategies?" Increased opportunities for social support networks are an important source of not only feeling connected, but also increased teaching self-efficacy and teaching effectiveness (Gappa et al., 2007; Baker-Doyle, 2011; Forbes et al., 2010).

Although adjunct faculty may have limited time on campus, each interaction they have with others, whether administrators, full-time faculty, or staff conveys a message about the climate of the institution. Overall, adjunct faculty in this study described their experiences working at the College as favorable. This was evidenced by many complementary statements about the positive and welcoming environment at the College. For example, "Everyone I've

come into contact with at MACC has been incredible. They are friendly, clear in their explanation of processes, and aware of the restraints and challenges of adjunct faculty." This welcoming feeling extends beyond classroom walls to include instructors that have never set a foot on campus, "I love the MACC family because they make me feel welcome even as an online instructor. Someone is always there and willing to assist me with and questions I have and I feel like it is so much more than a typical community college." Another said, "I would never trade it for anything. I have loved (almost) every day of the 20 years I have been teaching." These positive feelings relate to teaching self-efficacy in two key ways. First, positive emotional experiences contribute to increased feelings of efficacy. According to Bandura (1997) positive moods can promote high levels of perceived efficacy. From this, it can be extrapolated that experiencing positive feelings about ones' working environment can increase teaching self-efficacy beliefs. Second, there is evidence of a feeling of shared mission and purpose in serving students. This sense of shared mission was mentioned in both open-ended survey responses and in interviews. A common commitment to student learning is evidenced at multiple levels of an educational institution, and policies and practices affecting those providing direct instruction can either promote or detract from that teaching mission (Maxey & Kezar, 2015). From informal greetings to a range of teaching support practices that are in place for adjunct faculty, MACC has demonstrated evidence of taking steps to support the teaching focus of the institution by supporting and providing resources for teaching faculty. Though the institution has multiple supportive practices in place and adjunct faculty in this study offered many complimentary statements about working at MACC, there are also challenges that negatively influence teaching self-efficacy.

Challenges to Teaching Self-Efficacy

Challenges that adjunct faculty identified as influencing their teaching self-efficacy can be organized into two broad categories: (a) challenges related to serving students and (b) challenges related to working conditions. These findings are consistent with the top two challenges perceived as negatively influencing teaching effectiveness identified by adjunct faculty in Pompper's (2011) research highlighting the working experiences public relations instructors.

Challenges related to serving students. Issues related to serving students were the most frequently identified challenges to teaching self-efficacy in this study. In both open-ended survey responses and in interviews, adjunct faculty had a lot to say about the students they teach and the unique challenges that accompany working with community college students. According to adjunct faculty in the study, the most significant challenge lies in working to meet the needs of a wide range of student learners. This challenge is not unique to instructors at MACC nor is it isolated to community college campuses (e.g. Dolan et al., 2013; Allison, 2014). A typical class roster might include recent high school graduates who are not prepared for college level work alongside middle-aged adults with decades of professional experience looking to make a career change. Instructors described struggling with engaging students who had not yet found direction and whose lack of motivation resulted in missed assignments, inattentiveness, and lack of effort in the classroom. They talked about difficulties in pacing the lessons to meet the needs of more advanced and highly motivated students while not leaving lower-performing students behind. Teaching self-efficacy beliefs can play an important role in setting goals and expectations for student learning. Allinder (1995) found that teachers with higher teaching self-efficacy beliefs set more ambitious goals for their students. Student academic performance can be improved by promoting instructors' efficacy in their abilities to effectively meet their learning needs. An

instructor with three years of teaching experience voiced the need for additional training to accommodate a range of students, "I think it would be helpful to [learn] the different techniques and tactics that you would use with the adult learner…really tapping into how adults learn, and how as an adjunct faculty you can best implement those skills to engage your students more." Adjunct faculty expressed feeling unprepared to work with students needing accommodations due to learning differences. The challenge, in the words of a survey respondent, lies in "…addressing needs of a diversity of student learners ranging from severe learning disabilities, to veterans with PTSD, to normal/outstanding learners." Rankin et al. (2011) echo this challenge and posit that considering students' levels of preparation and motivation are essential to promoting student retention and success.

It was revealed that student-related challenges to teaching self-efficacy extend beyond the students' experiences within classroom walls. Adjunct faculty shared struggling to help students experiencing multiple pressures and life challenges outside of the classroom that impacted their academic performances. Motivating students "…who feel overwhelmed with life, family, work, and school" and "…come to class completely exhausted or distracted" was a challenge mentioned frequently by instructors in the study. Outside obligations and pressures influence students' performance in the classroom and feeling powerless in providing adequate support is a source of frustration for many adjunct faculty. The 18-year veteran explained that flexibility, willingness to work with students to get work done, and "approaching students as a whole person" have all contributed to an increased sense of confidence in working with students with difficult life circumstances and has helped them to "complete my course and learn the material." This flexibility in working to meet student needs is an important element of high quality teaching identified by Roueche, Roueche, and Milliron (2003). From both phases of data collection, there

was convergence of evidence showing that adjunct faculty view issues related to serving students as the most significant challenge to their teaching self-efficacy. Keeping in mind that teaching self-efficacy beliefs have been shown to influence the utilization of a variety of teaching techniques, effort expenditure, and persistence in helping struggling students, providing adjunct faculty with training and support in meeting the challenges of the students they teach is an essential step in increasing teaching effectiveness (Fives & Buehl, 2012; Tschannen-Moran et al., 1998).

Working conditions. Multiple aspects related to part-time employment were mentioned as challenging adjunct faculty's perceived abilities to deliver effective instruction. Challenges related to working conditions experienced by adjunct faculty are well documented in the higher education literature (e.g. Allison et al., 2014; Kezar, 2012/2013; Dolan et al., 2013). Adjunct instructors in the current study echoed several of these challenges. Most information about perceived challenges related to working conditions came from open-ended survey responses. It is believed that under the cover of anonymity, instructors expressed concerns related to working conditions more freely than in face-to-face interviews. Challenges related to working conditions identified by adjunct faculty in this study include time management, low pay, job insecurity, communication issues, and inconsistent/lacking onboarding practices.

Inadequate pay and job insecurity. The most frequently mentioned challenge in this area was struggling with time management. Closer inspection of this data revealed that challenges related to time are more complex than merely pressures of the clock. The larger message is one related to time pressures associated with multiple employment commitments needed to earn a living, lack of job security, and inadequate pay. Adjunct faculty described difficulties in managing multiple commitments. Additionally, they expressed feeling like the

time needed to effectively plan, prepare, and grade was not adequately compensated. Non-compensated time is an area of challenge that has emerged in previous studies of adjunct faculty (e.g. Allison et al., 2014). Building on compensation issues related to time, adjunct faculty in this study had more to say about how delivering effective instruction can be influenced by low pay.

One adjunct instructor summarized the connection between low pay, temporary employment, and instruction saying, "Without job security from semester to semester, in addition to low compensation for my work, I feel like any time spent trying to improve my instruction is a waste of my time. If the college invested in me as a professional who has a Ph.D. and is an expert in the field, then I would likely spend the time providing more effective instruction." Adjunct faculty also described experiencing frustration and the financial blow that results from planned courses ultimately cancelled due to low enrollment. According to Bandura (1977), inadequate pay could have a detrimental relationship to efficacy beliefs and subsequent performance. He explains, "Under conditions in which people differ substantially in component capabilities and motivation, skill and incentive factors will also contribute to variance in performance" (p. 206). This is particularly poignant in the context of this study. Given the wide range of backgrounds, education, teaching experiences, and motivations for teaching represented in this population of educators, when work is not incentivized with appropriate pay, teaching performance could suffer.

Communication. Another set of challenges related to working conditions stem from communication issues. Adjunct faculty experience these in several ways. Some perceived that communication was "lacking" towards adjunct faculty in comparison to full-time colleagues. Email is often the sole communication link between instructors and the College. Adjunct faculty

relayed feeling overwhelmed by the volume of "unrelated or repetitive" information transmitted via email. This may cause instructors to quickly filter through their messages, assigning mental priority to messages from students and those that are course related, while ignoring others that may contain information about opportunities perceived as less important at the time such as those announcing training opportunities. A review of message filtering settings (SPAM filters) and of the accessibility of the email list-serve for adjunct faculty by others at the College may be necessary. Lack of communication of feedback and evaluation results was also identified as a challenge. Asked about the adjunct faculty evaluation process, some described a breakdown in the process when it came to communicating the results. For adjunct faculty in this study, feedback has been discussed as one of the most influential sources of teaching self-efficacy. Effective communication is essential to keeping adjunct faculty connected and a breakdown in the process at any level can result in loss of valuable information including evaluation feedback and increased feelings of isolation.

Onboarding. The final area of challenge related to working conditions identified by adjunct faculty in this study relates to onboarding procedures. Adjunct faculty expressed the need for more comprehensive and consistent procedures for new hires. Deficiencies in this area have been well documented (e.g. Allison et al., 2011; Kezar, 2013). It is not uncommon for adjunct faculty to be hired at the last minute due to enrollment and/or staffing fluctuations. In this study, an instructor hired one day prior classes starting described the challenges of "catching up" that involved navigating policies, struggling to understand grading practices, and managing logistics such as making copies and operating the classroom lectern. This was an extreme example of last minute hiring and feeling "thrown into the deep end" that is frequently shared among adjunct instructors as also evidenced by Pompper (2011). Another new instructor talked

about his experience upon hiring, “There was no new employee orientation, so it was like, OK you’re hired. You did great in the interview and when can you start? I walked in day one and it was like, OK we are going to do this with the students and where do you want me to begin, just go, and OK, I’ll make it work.” He further stated, “It would be nice to have some kind of, whether it be electronic documentation or, like a human resource book to help you.” Finally, on the survey, one adjunct instructor shared, “I had a terrible first year working for MACC because expectations and policies were not explained.” More comprehensive orientation procedures and availability of polices and procedures in writing were needs identified by adjunct faculty in this study to help increase teaching self-efficacy beliefs especially among those with little to no experience. In support of this, Kezar (2013) advocated for better onboarding practices and the availability of policies, procedures, and available resources in writing for all faculty, including those teaching part-time.

Limitations

This is a single institution case study with limited generalizability. The choice to use MACC as the institution was made with thought and purpose. Teaching self-efficacy is context dependent and focusing on gaining an in-depth understanding of not only adjunct faculty’s experiences but also their environment was possible given this setting. Adjunct faculty provide instruction for over 70% of courses at this institution. In addition, MACC had several practices in place that are supportive of adjunct faculty including a comprehensive evaluation process, setting it apart from institutions lacking such supports. It is of note that even within the same institution, adjunct faculty’s experiences varied by department, experience, and by career stage. This is consistent with adjunct instructors’ experiences highlighted by Gappa and Leslie (1993). This study did not include full-time faculty. Adjunct faculty are an understudied population in comparison to full-time, tenure track colleagues, and because teaching self-efficacy among

adjunct faculty has not been previously explored, the current study focused only on adjunct faculty to gain insight into their beliefs and contextual factors that influence those beliefs.

For the online survey, the 36% response rate is above average for rates typically seen at this institution. As email is the sole vehicle of communication for many adjunct faculty, it is still believed that this was the best way to distribute the survey. Unbalanced representation of participants in several key demographic groupings such as gender and academic discipline may have influenced statistical analyses. For example, females completed the survey at nearly a two-to-one ratio compared to males. This increases the risk of making a Type I error, that is, falsely rejecting the null hypothesis that there is no difference between the groups (Field, 2009). As a final technical issue that presented a challenge, on the survey, when asking participants to identify subject taught, other was provided as a choice without including a text box for elaboration. Consequently, the 15 participants that selected 'Other' (9.43% of responses) were excluded from the analysis of variance by academic discipline. This represented a loss of valuable data.

The current study assessed adjunct faculty's beliefs and perceptions of their teaching self-efficacy, not actual observations or measures of adjunct faculty's teaching abilities, behaviors, or outcomes related to their teaching. Also due to the nature of the research, asking about confidence in one's abilities to successfully execute specific teaching tasks, participants may have self-selected not to participate due to perceptions of their abilities. It was challenging to recruit adjunct faculty to be interviewed and those that did expressed high levels of confidence in their teaching abilities. It would have added additional perspective to the study to have instructors rating confidence in their abilities lower. It was hoped that purposeful selection of instructors from lists provided by administrators that worked directly with them would allow for

a greater diversity of interview participants including varying levels of teaching self-efficacy than those that may have volunteered via an invitation at the close of the surveys. It is of note that administrators and staff provided only partial lists of adjunct faculty in their divisions based on the criteria specified by the researcher rather than a complete listing of all instructors. Maximum variability of several factors, experience, academic subject, and gender was achieved, with the exception of those with lower teaching self-efficacy beliefs.

Future Research

Champions of self-efficacy and teacher motivation, Albert Bandura and Frank Pajares referred to Prieto-Navarro's College Faculty Teaching Self-efficacy scale as "an instrument with strong psychometric properties that is also faithful to the tenets of social cognitive theory" (Prieto Navarro, 2007, p. 14). However, research using the instrument is limited. The current study added to the small body of literature demonstrating this is a reliable instrument in assessing the teaching self-efficacy beliefs of college faculty. The instrument can be used to generate one score for overall teaching self-efficacy, or can be used to generate data about efficacy beliefs in the areas of instructional skills and creating a positive classroom environment as in DeChenne et al. (2012). Data from the current sample also indicated a third factor, assessing student learning can also be extracted from the data. This allows for flexibility of use. A recommendation for future researchers to use both parts of the CTSES, the first part assessing beliefs, as was used in this study, and the second part, targeting behaviors. The second part was not used in the current study to keep the survey at a reasonable length for online administration and because this study focused exclusively on beliefs not behaviors. Using both sections in concert will allow for increased insight into the direct relationships between beliefs and behaviors (Prieto Navarro, 2005). A second recommendation for future work is to compare findings across multiple institutions. This can include both two-year and four-year institutions. Finally, additional

insights into the factors that influence teaching self-efficacy could be gained by including the perspectives of other individuals such as department chairs, full-time faculty mentors, or other individuals that work closely with adjunct faculty. This might shed more light on differences based on personal factors that did not emerge in the current study.

Conclusions

The purpose of the current study was to advance an understanding of the teaching self-efficacy beliefs of part-time, adjunct community college faculty and identify factors that influenced those beliefs. Because both self-efficacy beliefs and adjunct faculty's experiences are highly dependent on context, mixed research methods were used in the setting of a single institution with a teaching focus. The design of this study allowed for depth of understanding the teaching self-efficacy beliefs of this understudied population of educators who are responsible for providing over 50% of the instruction in U.S. institutions of higher education. Information learned from this study not only adds to the teaching and learning in higher education literature, but can also be used to guide the development of additional policies and procedures that promote the teaching self-efficacy beliefs.

Although studies of teaching self-efficacy in higher education are few, K-12 literature supports the link between teaching self-efficacy beliefs, instructional behaviors and decisions and persistence in helping struggling students (Fives & Buehl, 2012). Keeping in mind that this study explored teaching self-efficacy beliefs, findings are based on perceptions of abilities, not actual observable behaviors. However, self-efficacy researchers such as Bandura (1997) and Tschannen-Moran et al. (1998), and leading teaching beliefs researchers (i.e. Fives & Buehl, 2012) strongly assert that self-efficacy beliefs accurately predict of behaviors and effort. One of the goals of this study was to use educational psychology to extend an understanding of how college instructors develop confidence in their teaching skills with the understanding that self-

efficacy beliefs play an important role in guiding behaviors, efforts, and persistence in times of challenge (Bandura, 1997). This goal was successfully accomplished. A great deal was learned about how the self-efficacy beliefs of adjunct instructors in this study developed and the multiple personal and contextual factors that influenced those beliefs.

The relationship between student performance and faculty professional development in the area of teaching has garnered much needed attention in recent years (Rutz et al., 2012). As Shulman (1993) argued, it is important to address the "pedagogical solitude" experienced by educators in higher education and open the doors to college classrooms with the goal of promoting students' academic success through improved teaching (p. 6). This study provided evidence for the powerful influence of doing just that. Opening the doors of adjunct faculty's classrooms to offer feedback, connect with colleagues, share teaching resources, and provide exposure to pedagogical skills increases teaching self-efficacy beliefs. These beliefs are strong predictors of instructional decisions and behaviors (Prieto Navarro, 2005).

A wide variety of educators representative of the diverse range of academic programs offered at community colleges participated in this study. Each offered a mix of unique perspectives along with shared concerns. Although teaching English seems far removed from teaching welding, and preparing future health services workers may seem unrelated to teaching art, each instructor voiced shared teaching concerns. Each was concerned with helping students who struggle not only academically, but beyond classroom walls as well, overburdened with life challenges and commitments. Each talked about difficulties with grading, expressed doubts about specific instructional skills, and shared evidence of constant efforts to critically reflect upon their teaching with the goal of making improvements. Each mentioned struggles related to part-time employment and low pay. And each embraced his/her role as an educator and offered

suggestions of how they could be supported in fulfilling that role more effectively. Adjunct faculty have a variety of backgrounds and motivations for teaching. Many are motivated by love of teaching to persist even when faced with challenges related to their part-time employment status.

Based on findings from this study, conclusions can be drawn about sources of teaching self-efficacy for higher education instructors and recommendations of how to create affordances for promoting teaching self-efficacy beliefs. With the caveat in mind that both adjunct faculty's work experiences and self-efficacy beliefs are highly dependent upon context, it is believed that the findings from the current study are transferable. The results are particularly applicable to other community colleges. Although some of the challenges related to teaching community college students are unique to two-year institutions, many of the current findings can also be considered in the four-year university context. At four-year institutions, adjunct faculty often experience similar if not more pronounced challenges to teaching self-efficacy with faculty and administrative attention to teaching-related issues divided among other institutional foci including research and service. This study provides evidence for the value of providing teaching support services. Though challenges remain, MACC is an example of an institution that is making progress in effectively supporting adjunct faculty and promoting teaching self-efficacy using evidence based practices. These efforts should be continued and expanded. Finally, it would be an opportunity lost if findings from this study were pegged as only applicable to adjunct faculty. Findings from this study provide valuable insights into teaching in higher education in general, highlighting areas of opportunity for improvement in how faculty are prepared to become educators.

Recommendations

Evidence from this study suggests that more training is needed for adjunct faculty to increase their confidence in their roles as educators. Rutz et al. (2012) demonstrated the link between faculty professional development in teaching skills and improved student performance. Though they may feel confident in their content expertise, they are less confident in developing their instructional skills and assessing student learning. Helping adjunct faculty to recognize the differences between formative and summative assessments and providing instruction in creating high-quality and accurate summative assessments is a specific area of need. This is an essential requirement for gauging student learning and teaching effectiveness. Flexible training opportunities that focus on pedagogical skills should be offered. Multiple formats including in person as well as online should be considered. It is important to carefully contemplate how additional training opportunities are to be implemented as adjunct faculty already feel the strain of effectively managing teaching-related activities without adequate compensation for the time required to do so.

It is also important to prepare instructors for the challenges they face in the classroom in working with students with a diverse range of experiences, levels of preparedness for college work, and motivations. This was the most frequently identified challenge to teaching self-efficacy identified by adjunct faculty in this study. Progress can be made in this area by introducing adjunct faculty to theories of student learning and motivation coupled with concrete examples and techniques for working with students. As an example of how MACC is already working to meet this need, an adjunct instructor in this study described an online interactive training module provided by the College that provided guidance in working with veterans and students with severe emotional disturbances. She offered praise for the module citing the online availability and the interactive decision logic design as strengths of the program. Future modules

could be designed to address the needs of first generation college students, students requiring accommodations, adult learners, et cetera to eventually create a teaching resource library accessible online by all faculty. This would provide valuable resources to help in effectively managing challenges, boosting teaching self-efficacy, and promoting persistence in working with struggling students of all levels and abilities.

Specific techniques to help in this area can be derived from both the K-12 and adult learner bodies of literature. A shift to student-centered strategies rather than teacher-centered, as is characteristic of higher education, has been suggested as a way of promoting college student learning and academic success (Lightweis, 2013). For example, K-12 instructors may support a diverse range of learners with practices such as differentiated instruction involving techniques such as flexible grouping, ongoing assessments, and challenging tasks appropriate for a student's level of readiness. In adult-focused research, competency-based education (CBE) in higher education has gained renewed attention in recent years. This approach emphasizes learning outcomes and demonstrated mastery of competencies. Key elements of this approach such as increased time flexibility for skill mastery, differentiated pacing, and using a variety of instructional methods may help to increase both teaching self-efficacy and student performance (Burnette, 2016). Although a faithful application of differentiated instruction or CBE would require a redesigning of traditional higher education modes of assessment and delivery, increased time, and extensive training that may be out of reach, elements and ideas from these approaches can be introduced and adopted into practice as deemed appropriate by college educators. Stocking adjunct faculty's teaching toolboxes with more evidenced-based techniques to use in working with diverse student learners will increase teaching self-efficacy and improve student performance.

Of the sources of teaching self-efficacy that emerged in this study, mastery experience was the most highly influential. For inexperienced instructors, social persuasion in the form of feedback was paramount. Institutional supports that provide the opportunity for feedback about teaching can play an important role in increasing teaching self-efficacy beliefs. An institutional culture in which there is shared value for and openness to feedback can be evident at every level. Making sure that opportunities for feedback are not only provided, but that feedback is conveyed in a consistent and constructive manner is important. Bandura (1995) explained that it is not just the feedback itself to consider, but also how the feedback is presented saying that the way in which evaluative information is conveyed can either "…undermine a source of efficacy or boost it" (p. 101). This is important to keep in mind at each level; from those designing evaluation/feedback processes to those delivering the feedback.

Although adjunct faculty in this study indicated that opportunities to receive feedback about their teaching boost their teaching self-efficacy, evaluative relationships should not be the only form of connection between full time and adjunct faculty. There is a need for not only formal mentoring relationships but also informal opportunities for interaction. These opportunities can help to alleviate feelings of isolation and increase connections between faculty. Increased informal opportunities to meet with others can be achieved through "lunch and learn" type sessions, departmental meetings to which all are invited, and communal gathering spaces. A broader network of connections will provide multiple benefits including increased collegiality, more support, and increased opportunities to share teaching resources and ideas for effective teaching practices. Adjunct faculty cited the opportunity to meet with others in their departments at convocation as a highly valuable experience. Adding a second convocation-type meeting in the spring in addition to the fall meeting may serve the dual purposes of both an

additional opportunity for collegiality and increased offerings for training in pedagogical skills. In consideration of vicarious experience as a source of teaching self-efficacy, providing instructors with the opportunity to observe others' high-quality teaching may also have a positive influence. Observation of a model followed by the opportunity to practice and integrate demonstrated skills is a potentially powerful source of efficacy beliefs (Bandura, 1997). A final recommendation inspired by the observed role of vicarious influence in promoting teaching self-efficacy is the establishment of teaching awards to recognize outstanding adjunct faculty. The vehicle for driving this, the adjunct evaluation process, is already in place. Recognition/awards would add both visibility and incentive for high-quality teaching and have been shown to increase teaching self-efficacy beliefs among full-time faculty (Morris & Usher, 2011). This need was mentioned on the surveys, "Adjuncts often feel under appreciated. There are no funding programs for adjuncts, there are few awards, if any, and very little recognition." As an additional benefit, creating awards for teaching and inviting adjunct faculty to attend the gathering/ceremony for the distribution of the awards would create additional opportunities for inclusion and collegiality.

It is clear from this study that there is variation in adjunct faculty's support needs based on experience. Kezar (2013) confirms this, arguing that it is "...important not to see [non-tenure track] colleagues as static and recognize that needs for support may change over time…fragmentation of NTTF careers means that pathways are more dynamic than typical tenure-track faculty members. The dynamics of their career trajectories are often overlooked by those creating policies and practices" (p. 33). Inexperienced instructors expressed the desire for more direct guidance on policies, practices, logistics, as well as feedback about their teaching performance. More experienced adjunct faculty advocated for the opportunity to play a more

active role in the selection of course materials (e.g. textbooks), have revised pay structures based on longevity, merit raises, be given priority in class assignments, and attend trainings on more advanced teaching topics beyond those focusing on logistics that are designed for new instructors. Increased opportunities to play a role in curricular decision-making processes were also mentioned. This would be beneficial for both experienced adjunct faculty and their institutions. Feeling like one has a voice in decision-making at a level that is appropriate for the employment position is an important contributor to collegiality and sense of institutional involvement (Gappa et al., 2007).

Although MACC is progressive in supporting teaching faculty, issues related to challenging working conditions also remain apparent. This is not isolated to one institution; rather it is reflective of the overall faculty employment landscape of higher education. Offering teaching support services is only one aspect of promoting the teaching self-efficacy beliefs of adjunct faculty. Deeper institutional and systemic changes are needed as well. Maxey and Kezar (2015) describe the issue as one of institutional contradictions that can only be fully reconciled with the reconceptualization of faculty roles and implementation of significant organizational changes that will ultimately promote successful teaching. This would involve a comprehensive review and revision of faculty roles. A small part of this includes rethinking the language used to designate faculty rank. The term *adjunct* highlights the tenuous status of part-time educators (AAUP, 2014). Though still nowhere near ubiquitous, titles such as "Teaching Faculty" or "Teaching Professor" are cropping up in U.S. institutions of higher education to denote the professional role of this segment of educators (Gluckman, 2017).

MACC is an exemplar institution that offers teaching support services beyond many comparable institutions. Several of these services were found to have a positive influence on

adjunct faculty's confidence in their teaching skills. However, without changing employment structures and procedures such as pay scales, onboarding practices, job security, and having a voice in decision-making processes, the work experiences of those responsible for providing the majority of instruction will remain misaligned with the stated institutional commitment to student learning (Maxey & Kezar, 2015). This study demonstrated how these challenges influence adjunct faculty's confidence and related efforts to improve teaching.

Once the door is closed and class begins, students may not even be aware of whether the educator at the front of the room is adjunct faculty or full-time. They will respond to and remember the quality of teaching they received and the knowledge they are able to take away from their learning experiences. Increasing adjunct faculty's confidence in their abilities to successfully deliver effective instruction to all learners through support, feedback, and training in instructional skills and also stepping back to examine and reconcile institutional practices and structures that affect pedagogical skills will promote self-efficacy, student learning, institutional effectiveness, and success for all those who are called to teach.

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Appendix A

College Teaching Self-Efficacy Scale – CTSES (Adjunct)

(Adapted from Prieto Navarro, 2006)

Please answer each of the following questions keeping the course that you teach most frequently in mind.

1 = Not at all confident
2 = Slightly confident
3 = Somewhat confident
4 = Moderately confident
5 = Mostly confident
6 = Completely confident

How confident am I in my ability to:

1. Specify the learning goals that I expect my students to attain?
2. Create a positive classroom climate for learning?
3. Reflect on my teaching practices with the aim of making appropriate improvements?
4. Develop different assessment methods depending on the learning goals I want to check in my students?
5. Evaluate the effectiveness of my own teaching in light of my students' feedback to me?
6. Promote student participation in my classes?
7. Prepare the teaching materials I will use?
8. Ensure that my students resolve the difficulties they encounter while learning?
9. Promote a positive attitude toward learning in my students?
10. Adapt my teaching practices in response to my students' evaluations of teaching?
11. Evaluate accurately my students' academic capabilities?
12. Decide on the most appropriate evaluation method for a particular course?
13. Ensure that my students consider themselves capable of learning the material in my class?
14. Employ systematic methods that permit me to assess my own teaching?
15. Clearly identify my course objectives?
16. Maintain high academic expectations?
17. Use information derived from my own self-reflection to improve my teaching?
18. Adequately grade my students' exams and assignments?
19. Adapt to the needs of my students (motivation, interest, prior knowledge, etc.) when planning my course?

20. Think of my students as active learners, which is to say, knowledge constructors rather than information receivers?
21. Provide support and encouragement to students who are having difficulty learning?
22. Update my knowledge of the subject I am teaching?
23. Provide my students with detailed feedback about their academic progress?

24. Calmly handle any problems that may arise in the classroom?
25. Develop my teaching skills using various means (attending conferences, reading about pedagogy, talking to other professionals…)?
26. Use formative assessment to gather information about my students' academic progress?
27. Encourage my students to ask questions during class?
28. Make students aware that I have a personal investment in them and in their learning?
29. Evaluate the degree to which my course objectives have been met?
30. Design the structure and content of each class?
31. Let students take the initiative for their own learning?
32. Show students respect through my actions?
33. Be flexible in my teaching even if I must alter my plans?
34. Make students aware of the relevance of that they are learning?
35. Master the material that I cover in class?
36. Promote my students' confidence in themselves?
37. Make my students feel that their academic success is due to their own efforts?
38. Spend the necessary time to plan my classes?
39. Select the appropriate materials for each class?

Context Specific Items (Branching logic questions)

41. Have you attended adjunct academic convocation? YES/NO

If YES: How much has information learned at convocation influenced your effectiveness as an instructor? Sliding bar = 1 (Not at all influential) to 6 (Extremely influential)

Comment box:

42. Have you participated in a formal mentoring relationship with a more experienced faculty at this College? YES/NO

If YES: How much has a mentoring relationship influenced your effectiveness as an instructor? Sliding bar = 1 (Not at all influential) to 6 (Extremely influential)

Comment box:

43. Have you received feedback about your teaching in the form of student evaluations of teaching? YES/NO

If YES: How much have student evaluations of teaching influenced your effectiveness as an instructor? Sliding bar = 1 (Not at all influential) to 6 (Extremely influential)

Comment box:

44. Have you received feedback about your teaching from the adjunct evaluation process? YES/NO

If YES: How much has the adjunct evaluation process influenced your effectiveness as an instructor? Sliding bar = 1 (Not at all influential) to 6 (Extremely influential)

Comment box:

45. Have you attended a training or workshop at the College about teaching? YES/NO

If YES: How much have trainings/workshops offered by the college influenced your effectiveness as an instructor? Sliding bar = 1 (Not at all influential) to 6 (Extremely influential)

Comment box prompt: Please share your thoughts about specific workshops/trainings you have attended at the College.

Open-ended questions

46. What do you identify as challenges that affect your ability to provide effective instruction?

47. What are some actions or steps that the College could do to enhance your ability to provide effective teaching?

48. What else would you like to say about your experience teaching as an adjunct faculty at the College?

Demographics

49. Gender:
    - Male
    - Female
    - Other
    - I prefer not to answer

50. Race/Ethnicity:
    - White
    - African-American
    - Asian-American
    - Hispanic/Latino
    - Native American/Pacific Islander
    - Other
    - I prefer not to answer

51. Years of university level teaching experience?
    (Text box – continuous variable)

52. Discipline:
    - Business and Accounting
    - Emergency Medical Services
    - Engineering
    - English
    - Exercise and Health
    - Funeral Services
    - Humanities and Social Sciences
    - Industrial Technology
    - Information Technology
    - International Education
    - Mathematics
    - Natural Sciences
    - Nursing
    - Public Services
    - Visual and Performing Arts
    - Other

53. Which of the following best describes your background as a teacher?
    - No formal training in teaching
    - Informal teaching experience
    - I have attended teaching workshops/trainings
    - I have a degree in teaching/education
    - Other (text box)

54. What is the last degree you obtained?
    - Associate's
    - Bachelor's
    - Master's
    - Doctoral
    - Other (text box)

55. In which format do you teach most of your classes?
    - Classroom
    - Online
    - Hybrid
    - Dual enrollment

56. What level of course do you usually teach?
    - Developmental
    - Non-developmental

57. Which best describes you as an adjunct faculty? (Check all that apply)

I aspire to be full-time faculty
I teach part-time at multiple institutions
I teach part-time in addition to a full time job
I teach part-time to accommodate other life commitments
I am retired from full time work
Other (Please explain)

Deleted Items: Deleted due to either redundancy or not applicable to current setting.

1. Actively engage my students in the learning activities that I include in my teaching plan/syllabus? (Redundant)
2. Use different evaluation methods? (Redundant)
3. Give students feedback about their progress? (Redundant)
4. Permit my students to prepare and/or develop some of the course units? (Not applicable)
5. Modify and adapt my syllabus if my students' needs require it (Redundant)

Appendix B

Table B1

Number of survey participants by Academic Subject Taught

Academic Division	Subject	Number of Participants
Arts, Humanities, Social Sciences	English	18
	Humanities and Social Sciences	40
	International Education	0
	Visual and Performing Arts	11
Engineering, Business, Public Services	Business and Accounting	6
	Engineering	2
	Industrial Technology	2
	Information Technology	9
	Public Services	5
Math, Natural and Health Sciences	Emergency Medical Services	2
	Exercise and Health	7
	Funeral Services	2
	Mathematics	19
	Natural Sciences	20
	Nursing	1
Other		15
Total Participants		159

Appendix C

Table C1

Item-Level Descriptives for the CTSES – Adjunct, MACC Administration

Item	Factor	Mean	Std. Dev.	Mode	Max	Min
Show students respect through actions	Creating a positive environment	5.56	0.69	6	6	2
Master the material you cover in class	Instructional skills	5.43	0.74	6	6	3
Update knowledge of subject you are teaching	Instructional skills	5.40	0.74	6	6	2
Maintain high academic expectations	Instructional skills	5.40	0.75	6	6	2
Be flexible in teaching even if you have to alter plans	Creating a positive environment	5.40	0.69	6	6	2
Make students aware of the relevance of what they are learning	Creating a positive environment	5.40	0.74	6	6	2
Clearly identify course objectives	Instructional skills	5.39	0.81	6	6	2
Create a positive classroom climate for learning	Creating a positive environment	5.38	0.89	6	6	3
Prepare teaching materials	Instructional skills	5.37	0.77	6	6	2
Promote a positive attitude toward learning in your students	Creating a positive environment	5.36	0.80	6	6	2
Make students aware you have a personal investment in their learning	Creating a positive environment	5.35	0.82	6	6	3
Encourage students to ask questions during class	Creating a positive environment	5.34	1.14	6	6	1
Specify learning goals you expect students to attain	Instructional skills	5.33	0.82	6	6	3
Provide support and encouragement to students having difficulty learning	Creating a positive environment	5.31	0.76	5	6	1
Adequately grade students exams and assignments	Assessing student learning	5.30	1.08	6	6	2
Provide students with detailed feedback about their progress	Instructional skills	5.23	0.83	6	6	1
Reflect on teaching practices with the aim of making improvements	Instructional skills	5.20	0.85	6	6	2
Make students feel their academic success is due to their efforts	Creating a positive environment	5.20	0.91	5	6	1
Spend necessary time to plan classes	Instructional skills	5.20	0.96	6	6	1
Use information derived from self-reflection to improve teaching	Instructional skills	5.16	1.02	6	6	1
Promote students' confidence in themselves	Creating a positive environment	5.12	0.83	5	6	1
Evaluate the degree to which course objectives have been met	Instructional skills	5.12	0.90	5	6	1

Design the structure and content of your courses	Deleted from factor analysis	5.11	1.20	5	6	2
Think of students as active learners	Creating a positive environment	5.03	0.96	5	6	1
Select appropriate materials	Deleted from factor analysis	5.07	1.23	6	6	1
Promote student participation in your classes	Creating a positive environment	5.02	1.01	5	6	2
Adapt to students' needs when planning courses	Assessing student learning	5.00	1.00	5	6	2
Evaluate effectiveness in light of student feedback	Instructional skills	4.97	0.91	5	6	2
Calmly handle classroom problems	Creating a positive environment	4.97	1.20	5	6	1
Ensure students consider themselves capable of learning material in your class	Creating a positive environment	4.95	1.04	5	6	2
Ensure students resolve difficulties they encounter while learning	Creating a positive environment	4.88	0.92	5	6	2
Accurately evaluate your students' academic capabilities	Assessing student learning	4.87	1.01	5	6	2
Decide on the most appropriate evaluation method for a course	Assessing student learning	4.87	1.15	5	6	2
Adapt teaching in response to SETs	Instructional skills	4.85	1.09	5	6	1
Let students take initiative for own learning	Creating a positive environment	4.81	1.00	5	6	1
Develop teaching skills using various means	Instructional skills	4.81	1.12	5	6	1
Use formative assessment to gather information about students' academic progress	Instructional skills	4.67	1.12	5	6	1
Develop different assessment methods depending on learning goals	Assessing student learning	4.67	1.42	6	6	1
Employ methods that permit you to assess your own teaching	Instructional skills	4.52	1.21	5	6	1

Note: Likert-type items rated on scale 1= Not at all confident, 6 = Complete confidence

Appendix D

Semi-Structured Interview Protocol

1. How long have you been an adjunct at MACC?
    a. Probe: How long have you been teaching in higher education?
2. Tell me about how/why you became an adjunct?
3. Describe your teaching experience(s) prior to becoming an adjunct.
4. What courses do you typically teach?
5. If I asked you to rate your confidence in teaching undergraduate courses in your discipline on a scale of 1-10, 1 being not at all confident, 10 being completely confident, what number would you select? (Morris & Usher, 2011)
6. Can you tell me the reasons you selected this number? (Morris & Usher, 2011)
7. What are areas of your teaching that you feel are strengths (areas of higher confidence)?
8. What do you think has had the most powerful influence on your confidence as a teacher? (Morris & Usher, 2011)
9. What experiences have you had that made you more confident as a teacher of community college students? (Adapted from Morris & Usher, 2011)
    a. Probe: What do you identify as supports that influence your confidence in your teaching capabilities?
10. What do you identify as challenges here at MACC that influence your confidence in your teaching capabilities?
    a. Probe: What are some of the challenges of working with community college students?
    b. Probe: What parts of teaching do you feel are areas of opportunity for growth (areas of lesser confidence)?
    c. Probe: Thinking back to the area(s) of opportunity for growth you identified, what steps would you take if you wanted to improve confidence in this area?
11. From the surveys, many of your peers identified assessing student learning as an area of lesser confidence. Do you agree? (if yes) What undermines your confidence in this area?
    a. Probe: How do you know your students are learning?
12. What could MACC do to improve your confidence as an instructor?
    a. Probe: In the surveys, many adjunct faculty suggested that more professional development/training opportunities would be helpful. What would your ideal training format/experience look like?
13. What else would you like to say about your experience teaching as an adjunct at MACC?

Vita

Christy Leigh (Timmons) Tyndall was born in New Mexico and is a citizen of the United States of America. Christy received her Bachelor of Arts in Psychology with a minor in International Relations and the distinction *Magna Cum Laude* from the University of Southern California and the degree Master of Education in Counseling Psychology from Teachers College, Columbia University. Her academic accolades include Phi Beta Kappa, Phi Kappa Phi, and Psi Chi International Honor Society in Psychology. Christy is an experienced professional counselor and specialized in working with adolescents with substance abuse and severe behavioral problems in both school and non-profit settings using cognitive behavioral approaches to identify and implement adaptive strategies for personal change. She has worked extensively in higher education at both four-year and two-year institutions with leadership experience in student and financial services, and has accumulated over a decade of college teaching experience as an adjunct instructor. Christy's research focuses on the multiple factors that contribute to college student success with emphasis on motivation, development, and teaching/learning. Her recent work highlights the teaching beliefs and experiences of adjunct faculty. Christy lives in Richmond, VA with her husband and two sons.