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# THE IMPACT OF TEACHER METHODOLOGY TRAINING FOR HIGHER EDUCATION FACULTY MEMBERS

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THE IMPACT OF TEACHER METHODOLOGY TRAINING FOR HIGHER  
EDUCATION FACULTY MEMBERS

by

Nicole R. Baker

Dissertation

Submitted to the Faculty of

Olivet Nazarene University

School of Graduate and Continuing Studies

in Partial Fulfillment of the Requirements for

the Degree of

Doctor of Education

in

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SIGNATURE PAGE

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## DEDICATION

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## ABSTRACT

Many college programs are designed to graduate individuals who are experts in their field of study, but not necessarily individuals who are trained in how to teach. This quantitative, quasi-experiment study examined college faculty member's level of training in the area of teaching practices and methodology. The relation to student satisfaction, current course performance, attendance, the belief in the need for training, and faculty member's sense of efficacy in teaching was explored. The Statistical Package for the Social Sciences (SPSS) was used to organize the data using a one-way ANCOVA to analyze the impact the level of training had on each area. Ninety-two faculty members and 405 students responded to the online survey, adapted from Pintrich, Smith, Garcia, and McKeachie (1991), Rosensitto (1999), Woolfolk and Hoy (1990), and Purdue Instructor Course Evaluation Service (2011). The researcher found statistically significant results for student satisfaction, current course performance and attendance. The faculty member's belief in the need for teaching methodology training showed that 96% ( $n = 87$ ) of the faculty surveyed felt there was a need to be trained to teach at the college level. It is recommended that college institutions develop a more formalized training program for faculty members. Further studies are needed to determine long-term impact on this training.

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## CHAPTER I

### INTRODUCTION

"Faculty are prepared as scholars, not teachers" (Lowenthal, Wray, Bates, Switzer & Stevens, 2012, p.150).

In the United States, college students who enroll in a teacher preparation program take coursework that includes learning methodologies, strategies, and classroom management systems to learn the tools needed to instill knowledge in our youth and operate an efficient and effective classroom. To become a licensed teacher, states require teachers to earn a Bachelor of Arts or Bachelor of Science degree from an accredited college or university. To obtain licensure, teacher preparation programs require extensive coursework in both content and methodology, as well as hundreds of hours of real-life practice in field experience and as student teachers (Vandewater, 2012). Teacher licensure programs require 50 to over 100 hours of observation hours, as well as a semester of full-time student teaching. Many states also require teachers pass a basic skills content test, as well as a pedagogical test, which shows knowledge of teaching methodologies and strategies. Upon successful completion of earning a teaching license, which is only valid for a specified period, a teacher must complete additional coursework or training to be eligible to renew their license. Because teachers are required to complete additional coursework or training, many teachers opt for a Master's degree to remain licensed (Vandewater). Elementary and high school teachers spend years honing skills

needed to teach and deliver content knowledge to others. In comparison of other teaching certifications, to teach at the college level, no accredited or state certified training or program is required (Barnes, 1984; Boyer, 1990; Lowenthal et al., 2012; Rosensitto, 1999). A college instructor must only possess the content knowledge and educational background in the area in which he or she desires to teach. Faculty hiring and course teaching approvals largely do not include teaching experience, teacher training, or knowledge of teaching methodologies. There is no assessment of the ability to teach or deliver content knowledge to others (Barnes; Boyer; Lowenthal et al.; Rosensitto). Since there is no state requirement for teacher training or licensure at the college level, where is this training happening? Barnes; Kane, Sandretto, and Heath (2002), and Rosensitto found there may be a lack of sufficient training to prepare faculty members to teach during the onboarding process at higher education institutions. Once employed as a faculty member, there may be a disconnect and lack of support or community to teach a faculty member how to teach others (Hora & Ferrare, 2012; Oleson & Hora, 2014). Kusch (2016) found that faculty members are learning how to teach by trial and error, by turning to personal experiences, or by using feedback from students instead of through a training or certification program.

#### Statement of the Problem

A faculty member at a higher education institution has content knowledge in his or her field of study, yet is not required to have training on how to deliver that knowledge to others (Lowenthal et al., 2012). There is no statewide teaching certificate or accredited program for higher education that specifically provides instruction on how to teach (Boyer, 1990). Because students have different learning needs, different instructional

approaches may be necessary to increase student satisfaction and achievement, as well as faculty sense of efficacy in delivering the material (Kolb, 2014). Therefore, training in the variety of instructional delivery methods may be necessary to increase student satisfaction, as well as faculty sense of efficacy in delivering the material. Because faculty may not have had training in teaching methodology or pedagogy, higher education faculty may be ill-equipped to meet the needs of diverse learners in the classroom (Anderson & Adams, 1992). More research is needed on the benefits of faculty development in the area of teaching methodologies and pedagogy and its effects on student satisfaction and faculty sense of efficacy (Romero, 2010).

The purpose of the current study was to explore the relationship between the level of teacher methodology training a faculty member received and the level of student satisfaction, current course performance, student attendance, and faculty sense of efficacy in teaching in order to explore the impact the methodology training had on these areas.

### Background

The words andragogy and pedagogy are commonly referenced terms in education. The comparison of these two words revealed a slight, but very distinct difference. Merriam-Webster (2018) defines both words as the art or science of teaching. Andragogy is a word meant specifically for teaching adults, pedagogy references teaching in general. The only word that makes these two definitions different is the word *profession*. Is *andragogy*, or the art of teaching adults, considered a profession as well? There are many facets to teaching, many different types of learners, and many theories to explore when trying to find what is best for the adult learner.

Aristotle's (Aristotle, trans. 1901) perspective on education bears a striking resemblance to our American educational systems today:

As things are. . . mankind are by no means agreed about the things to be taught, whether we look to virtue or the best life. Neither is it clear whether education is more concerned with intellectual or moral virtue. The existing practice is perplexing: no one knowing on what principle we should proceed - should the useful in life, or should virtue, or should the higher knowledge be the aim of our training; all three opinions have been entertained. Again, about the means there is no agreement: for different persons, starting with different ideas about the nature of virtue, naturally disagree with the practice of it.

A faculty or administrator in higher education today could have written the above quote, but it was written by Aristotle as he described the problems educators faced in ancient Greece. What does it mean to teach? The question of what it means to teach results in many different answers because as Aristotle stated, education means different things to different people. Faculty members define the role of a teacher and describe a teacher's responsibilities differently (Hora & Ferrare, 2012; Kane et al., 2002; Stark, 2000). Stark interviewed 89 faculty members in a qualitative study to determine the definition of teacher and to define the role of teacher. Faculty described teaching as the act of teaching students to think effectively, to help students clarify values and make commitments, to help students learn to make the world a better place to live, to gain personal enrichment, and to prepare students directly for jobs. Kane et al. stated to teach is to transmit concepts of the syllabus, to transmit knowledge, to help students acquire the teacher's knowledge, and to help students develop and change conceptions. Stes,

Coertjens, and van Petegem (2010) mentioned different roles for teachers as well: teachers as interactionists, teachers as information transmitters, and teachers as practical coaches. The researchers agree there is no one right way to teach, as our students, curricula, and content areas are varied, but faculty members must have a solid understanding of what works best for the adult learner (Hora & Ferrare; Kane et al.).

While many elementary and high school teaching methodologies and strategies work in the higher education setting, adult learners have different needs than younger students and faculty members need to understand how adults learn (Kane et al., 2002; Knowles, 1984). Faculty members must also understand mindset and how it plays a part in adult education (Lischka, Barlow, Willingham, Hartland, & Stephens, 2015). A person with a fixed mindset will avoid struggle in learning, whereas a growth mindset will view a new challenge as a productive struggle. How a faculty member approaches these two different mindsets may affect the way a student learns (Lischka et al.).

Knowles (1984) pioneered researching the way adults learn. Knowles was an Adult Learning Theorist who studied andragogy, the art and science of adult learning. Knowles believed that adults need reasoning and explanation for the things they learn and that instruction should be task-oriented and problem-oriented, rather than learning through rote memorization or isolated learning. Caine and Caine (1990) studied the brain and looked at how the brain learns best, research that supported Knowles' theories. The brain learns best from what one experiences, not just the things one is told. Experiential learning supports the idea of active learning strategies in the classroom. The brain organizes facts and skills in isolation, like those in a lecture, differently. Facts and skills need much more practice, rehearsal, and repetition. "All new information must be worked

on before it is stored" (Caine & Caine, p. 68). Concentrating too heavily on unconnected facts and pieces of data is a very inefficient use of the brain. Knowles stated learning activities should be in the context of common tasks. Caine and Caine stated that teachers need to simulate real-world experiences as often as possible through collaborative learning, visual imagery, projects, field trips, metaphors, drama, demonstrations, and other interactive and highly engaged learning tasks. Faculty members should not exclude lectures and analysis, but should make them be a part of the larger experience. Faculty members should "help students to appreciate the value of studying the content by discussing applications to the real world and how students can use the content in their personal lives or future careers" (Blumberg, 2016, p. 313).

Knowles (1984) believed that the chosen delivery method should consider the wide range of different backgrounds and learners that make up a classroom. The delivery method should also differ from content to content. The activities chosen should allow for different levels of understanding, as well as different types of learners in the classroom. Many college faculty members do not recognize students' learning needs and often rely on outdated and ineffective teaching strategies that adversely affect students' ability to achieve learning goals (Elliott & Oliver, 2016). Adults are self-directed beings. Instruction should allow learners to discover knowledge independently, but with the guidance, support, and help of others (Knowles).

There are many theories and philosophies about teaching, but few are specific to teaching in higher education. Elementary learning theories can apply to an adult learning environment (Blouin, Joyner, & Pollack, 2008; Romanelli, Bird, & Ryan, 2009). Idealism goes back to ancient India in the East and Plato in the West and is the oldest system of

philosophy known to man. Like Knowles' Principles of Andragogy, idealism is the basis that one can obtain knowledge in ways other than the scientific method (Knowles, 1984). Faith, experiences, authoritarianism, and intuition are all considered instruments of knowledge (Apps & Syracuse University, 1973). Students use their beliefs, morals, values, and experiences in learning.

Similarly, existentialism ideals state that a student develops interest in topics that have deep and personal meaning (Magrini, 2012). One enters the world and then proceeds to create his or her world through free, autonomous choice. Knowles spoke about the motivation of adult learners, which ties into existentialism in that a learner is responsible for his or her own condition (as cited in Apps & Syracuse University, 1973). "Our world and ideas are not given, they are not indelibly etched-in-stone, and change to both the world and our ideas is possible through united, ecumenical activity" (Magrini, p. 3). The student plays a large part of driving the curriculum in an existentialist classroom because the curriculum goes through using the student's emotional and intellectual autobiography to drive the course. This does not mean the teacher allows the students to dictate every aspect of the class, but rather the teacher is in command of the subject matter, but tailors it to fit the students' needs (Blouin et al., 2008; Romanelli et al., 2009).

Skinner researched behavioral theory, self-regulating, and manipulating the environment, another trait of adult learners (as cited in Apps & Syracuse University, 1973). Other researchers like Montessori, Neill, and Dewey (as cited in Apps & Syracuse University) researched cognitive theory, similar to Knowles' adult learning theories and his views on bringing relevance to the classroom (Blouin et al., 2008; Romanelli et al., 2009).

Theorists like Vygotsky, Dewey, Bruner, and Piaget studied social constructivism and creating meaningful contexts for learning, which ties into Knowles' theories as well (as cited in Apps & Syracuse University, 1973). With the growing trends of technology integration and meeting the needs of individual students through looking at learning styles and needs, college classrooms would also benefit from looking at the teaching principles and ideas gleaned from a student's experiences in elementary and high school (Blouin et al., 2008; Romanelli et al., 2009).

"The culture of American higher education encourages a high degree of individual autonomy: we design our own courses, do our own teaching, set our own standards, and construct and grade our own exams" (Holyer, 1998, p. 40). Researchers found that faculty members were well-prepared for the research role, yet had minimal formal teacher training to prepare him or her for the teaching role (Kane et al., 2002). A faculty member's concept of good teaching was a result of his or her own experiences in the classroom (Kane et al.). Stark (2000) agreed that faculty members rely heavily on experience to drive the planning and decision-making process in the classroom. A faculty member's individual experiences as a student and teacher, disciplinary tradition, and department resources, played a role in making decisions about classroom instruction (Hora & Ferrare, 2012). Most times, faculty members used the course syllabus and teaching materials from a curriculum committee or a previous instructor to decide what to cover in class. Hora and Ferrare stated that faculty members use the syllabi and make alterations with the acquisition of knowledge from teaching the course a few times. The syllabus did not provide guidance in how to teach, only the concepts on which to cover.

Powers (1992) agreed that faculty development and training is lacking. “Most instructors do not receive any [professional] development, regardless of how well they perform. When it does occur, it is almost always self-initiated” (p. 182). Elliott and Oliver (2016) researched to determine if faculty development in the area of teaching theory and methodology had an impact on student academic achievement in community colleges. The researcher's findings supported the hypothesis that faculty involvement in professional development activities had statistically significant results for student academic achievement in terms of student perceptions of faculty effectiveness.

Kane et al. (2002) found that many schools across the country have dedicated teaching and learning centers, but few have set programs in place that are specific to faculty training on teaching methodologies. Harvard, Massachusetts Institute of Technology (MIT), Brown University, Ohio State, and Berkeley are all schools that have a specific teaching methodology training program in place for higher education faculty to participate (Grasgreen, 2010). Other countries instituted higher education teaching training programs, such as the Higher Education Academy (HEA) in the United Kingdom (Parsons, Hill, Holland, & Willis, 2012). The HEA worked with other institutions to develop partnerships that included the Centres for Excellence in Teaching and Learning program in England and North Ireland, the Scottish Quality Enhancement Themes, Wales' Future Directions initiative, and the United Kingdom Professional Standards Framework (UKPSF) for teaching and supporting learning in higher education. The UKPSF standards provide a focus through a framework of common standards, and it encourages institutions to develop and apply teaching development programs to fit the

needs of the individual school. Schools developed their programs independently, but under some commonalities (Parsons et al.).

Lowenthal et al. (2012) examined institutions with teaching and learning centers. At these centers, faculty members had opportunities to be involved and to extend knowledge about the teaching profession. Lowenthal et al. wanted to find out the reasons why instructors would or would not get involved in development opportunities. The researchers found that instructors attended faculty development opportunities to improve the quality of their instruction, to strengthen their portfolio, to move through the tenure process, or because of coercion by department chairs. Many faculty members chose not to participate if not coerced to do so. Institutions of higher education recognized the disconnect between content and the ability to teach the content and saw a need for faculty development in the areas of teaching theory and methodology.

Are there benefits to having a trained teacher in the classroom when we look at student absenteeism? Little research exists to discover if there is a connection between the two (Friedman, Rodriguez, & McComb, 2014; Moore, Armstrong, & Pearson, 2008). Absenteeism is a complete and multi-faceted phenomenon (Lopez-Bonilla & Lopez-Bonilla, 2015). Many research studies examine absenteeism comparing other educational concerns like retention, attrition, and grades, but little research exists in relating absenteeism to other factors, such as teacher satisfaction (Friedman et al.; Moore et al.). A challenge of today's college faculty member is to create a positive learning environment with the hope that the environment will lead to increased student involvement, reduced absenteeism, and improved student achievement (Lopez-Bonilla & Lopez-Bonilla). Moore et al. found that if class time is not perceived as being

worthwhile, relevant, or useful, a student's tendency to attend class may be adversely affected. Lopez-Bonilla and Lopez-Bonilla identified seven determining factors of absenteeism in their study: efficiency, teaching style, academic interest, teaching contents and format, classmate's influence and fears, and convenience. A faculty member's teaching style was the given the highest average score for why students choose to be absent, excluding for health and bereavement reasons.

Another area to examine is if there is a difference between full-time and part time instructors. In recent times, the use of adjunct faculty members in university classrooms across the country has dramatically increased (Langen, 2011). A growing trend is to have more adjunct faculty than full-time, tenured faculty teaching at an institution. Many adjunct faculty members teach at the college level as supplemental income to a full-time day job, and many faculty members are getting started teaching at the college level later in life as a mid-career switch (Strage & Merdinger, 2015). Holyer (1998) stated that administration sets high expectations for faculty, revealing faculty lacked enthusiasm as a result of already being over-scheduled. Adjunct faculty members have a difficult time meeting the demands placed upon them due to having other job and personal priorities. Getting faculty to participate in extra training was a challenge (Holyer; Langen; Strage & Merdinger).

Oleson and Hora (2014) similarly studied faculty willingness to participate in training and found that some faculty members might not see the need for improvement. For some faculty, years of satisfactory teaching were reason enough not to take additional efforts to learn more about teaching practices. There were faculty members that taught for 20 or 30 years and had success in the classroom. Oleson and Hora concluded that faculty

members might not see the need for improvement since the current practices were successful.

Institutions had more success with faculty willingness to participate when the training session was a part of the onboarding process, before a faculty member was officially hired. Blumberg (2016) conducted a study that revealed younger faculty members were more open to utilizing learning-centered techniques than were the older faculty members. Therefore, Blumberg felt it would behoove administration to train faculty in the early stages of teaching in higher education or during the hiring process.

Research showed that after hiring a faculty member, a disconnect and lack of support or community to teach a faculty member how to teach others existed (Hora & Ferrare, 2012; Oleson & Hora, 2014; Strage & Merdinger, 2015). The researchers believed this lack of support caused some faculty members to disengage (Strage & Merdinger). Strage and Merdinger studied faculty disengagement and found that mid-career faculty members were often responsible for more than half of the teaching, research, and professional outreach conducted on their campuses. The researchers also stated that mid-career faculty members were often called upon to assume difficult and unpopular roles, yet these faculty members were often ineligible for many forms of faculty recognition or incentives, thus contributing to faculty stagnation. Strage and Merdinger revealed it was rare that faculty members received praise or recognition for extra efforts. Faculty evaluation was one opportunity to give faculty members praise, recognition, and coaching, but many schools did not have a program in place for evaluation (Hallinger, 2010).

Langen (2011) stated it was imperative to understand the evaluation practices in higher education institutions, including utilizing information gleaned from evaluations. Universities throughout the world found themselves in a race both to prove their merit and to keep up with both local and global competing higher education institutions, but few higher education institutions had evaluation systems in place to be able to show their merit and accomplishments (Hallinger, 2010). The researchers believed that dedicated, passionate, and committed faculty members were an integral part of any college classroom (Hallinger; Hora, 2015; Langen). Higher education administration desired to ensure that quality learning opportunities were available in all classrooms; understanding evaluation practices is an area that more research is needed (Langen; Hallinger).

The researchers believed that due to high turnover rates and an increase in part-time higher education faculty members, evaluation of faculty was going to be an important focus for higher education institutions (Hallinger, 2010; Hora, 2015; Langen, 2011). Teaching evaluations provided an opportunity for coaching, learning, and improving outcomes for students and institutions.

### Research Questions

To gain further knowledge of the impact of teaching methodology training on higher education faculty members, the current study will explore the following questions:

1. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' satisfaction of the faculty member?

2. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' current course performance?
3. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' attendance?
4. To what extent is there a relationship between amount of teaching methodology training and the belief that teaching methodology training is needed?
5. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and faculty sense of efficacy?

#### Description of Terms

*Adult Learner.* Any student who is age 18 and older (Rosensitto, 1999).

*Adult Learning Theory.* An idea or belief about the way in which adults learn (Knowles, 1984).

*Andragogy.* The methods or techniques used to teach adults (Knowles, 1984).

*Common Core State Standards (CCSS).* High-quality academic learning standards for math and English language arts adopted by most states (Turner & Danridge, 2014).

*Cooperative Learning Approach.* Learning with and from others (Vrioni, 2011).

*Differentiated Instruction.* The way in which a teacher anticipates and responds to different learners needs in the classroom. Teachers can differentiate by content, process, and product ("Differentiated Instruction," 2010).

*Fixed Mindset.* The belief that basic qualities like achievement and talent are fixed and not able to change (Lischka et al., 2015).

*Flipped Learning.* Direct instruction happens independently at home and face-to-face classroom time is transformed into a dynamic and interactive learning environment (Kurt, 2017).

*Full-Time Faculty.* Contract faculty who teach at least 12 credit hours per semester (Rosensitto, 1999).

*Growth Mindset.* The belief that basic qualities like achievement and talent can be improved based on hard work and dedication (Lischka et al., 2015).

*Higher Education.* Education beyond high school (Rosensitto, 1999).

*Individualized Education Plan (IEP).* A legal document for special education students with specific learning needs (“Individualized Education Plan,” 2010).

*Instructional Methodology.* The varied methods of delivering content (Rosensitto, 1999).

*Mid-career faculty.* A faculty member who is 10-15 years into his or her career (Strage, & Merdinger, 2015).

*Metacognitive Approach.* Awareness and understanding of one’s own thought process (“Metacognitive Approach,” 2010).

*Onboarding.* The action or process of integrating a new employee into an organization (Friedman, 2006).

*Pedagogy.* The art or science of teaching (Merriam-Webster, 2018).

*Problem-Based Learning.* A way of constructing and teaching courses using problems as the stimulus and focus for student activity (Westhues, Barsen, Freymond, & Train, 2014).

*Response to Intervention (RtI)*. A process used by teachers to meet the needs of struggling students (“Response to Intervention,” 2010).

*Self-Directed Learning*. Self-directed learning is a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, setting goals, identifying resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes (Knowles, 1984).

*Scaffolding*. Instruction where the teacher gives students the resources, support, and level of learning the individual student needs to be successful (“Scaffolding,” 2010).

### Significance of the Study

"There has been a steady increase in college enrollment rates in recent decades, which has not been accompanied by a corresponding increase in graduation rates" (Gray & Swinton, 2017, p. 65). The American Association of Community Colleges (2017) reported there were 1,108 community colleges in the United States; collectively they enroll 41% of the college students in the country. Hongwei (2015) stated that community colleges in particular, had low completion rates and student retention was considered an important measure of institutional effectiveness. Further research was needed on the extent to which a faculty member impacted institutional effectiveness and student satisfaction.

There was growing political discussion and action about free college tuition in recent years (Goldrick-Rab & Kelly, 2016). In 2015, former President Obama proposed tuition-free community college; Vermont Senator Bernie Sanders included discussion of free four-year public college on the primaries trail in the 2016 Presidential campaign; Massachusetts Senator Elizabeth Warren called for debt-free college in her high-profile

speech; Former Senator and U.S. Secretary of State Hillary Clinton campaigned on her own plans for free tuition for community colleges and no loan tuitions at four year public universities during her presidential run in 2016 (Goldrick-Rab & Kelly). Since 2014, four states and one city have free college tuition programs in place. Lawmakers in several other places across the country were considering similar programs (Turner & Danridge, 2014).

Tennessee, Oregon, Rhode Island, and San Francisco all have free-tuition programs in place for community colleges. New York was the first state to offer free tuition for both two-year and four-year colleges beginning in the fall of 2017 (Lobosco, 2017). Other states like Arkansas, Minnesota, and South Dakota offer free tuition for students enrolled in a high-demand field, and Louisiana offers free tuition for students who graduate high school with a 2.5 GPA or better, and at least an average standardized test score (Lobosco). With the increase in popularity of free college programs, there will be greater opportunity for students who were not otherwise able to attend college.

With the rise in the number of college students, more faculty members will be needed. Faculty members who know how to meet the demands of tomorrow's learners will be a necessity. It is important for those in higher education to keep abreast of the trends happening in elementary and high schools so higher education institutions are better prepared to service tomorrow's college students (Schwartz, McDonald, Vahabzadeh & Cotes, 2018).

One such trend in elementary and high schools today is the increase in assessment and accountability. Jochim and McGuinn (2016) found that standards coupled with assessments provided the basis for holding students, teachers, and schools accountable

for student learning in the K-12 setting. The introduction of Common Core State Standards (CCSS) included more rigorous assessments and established a higher bar than did previous assessments. Adopted by 42 states and the District of Columbia at the time of this writing, the CCSS for English Language Arts were created with college and career readiness standards as the foundation (Turner & Danridge, 2014). The states that have not adopted CCSS have adopted college and career readiness standards, making this focus a national priority. Schools are revising curricula and instructional materials used for literacy and other foundational core knowledge areas beginning in elementary school and through high school (Achieve Inc., 2012).

The increase in rigor of the assessments came at the same time when school districts introduced enhanced consequences for teachers, principals, and schools that failed to meet the standards (Jochim & McGuinn, 2016). Students became accustomed to more assessments and knowing where they stood in comparison to others. Unlike previous philosophies, students were encouraged to think independently and metacognition, or thinking about one's thinking, became commonplace in elementary school classrooms (Caine & Caine, 1991). Metacognition "helps us learn in much more depth because we begin to recognize and capitalize on personal strengths while improving or allowing for weaknesses . . . active processing becomes a vehicle for increasing relaxed alertness" (Caine & Caine, p. 151). With students taking more control over their thinking, Jochim and McGuinn stated that programs needed continual evaluation to accommodate the individual needs of students and students should be grouped into ability categories during times of instruction. Elementary and middle school teachers of today are scaffolding instruction and creating unique, individualized

education plans (IEPs) to meet the needs of all learners through differentiated instruction and programs like Response to Intervention (RtI), a program that categorizes students into tiers and teaches students at their level. Elementary school teachers of today take careful consideration of the learning style of his or her individual students. The elementary and high school students of today, who have grown up with this increase in assessment and accountability, will be the college students of tomorrow. College faculty need to be aware and understand the educational experience and background of the incoming students (Schwartz et al., 2018; Turner & Danridge, 2014).

Even though all states have variations of college and career readiness standards in place, it does not mean they are only offering a rigid set of prescriptive practices. Rather, schools offer pedagogical principles that are flexible so teachers can adapt to meet the needs of individual students (Turner & Danridge, 2014). Even with these college-readiness programs in place, students are still entering college unprepared (Bailey, 2009). Bailey conducted research on college readiness and found that approximately 60% of students entering community colleges needed developmental education before they were ready for entry-level, credit-bearing courses. A more recent report from ACT (2013) also supported the idea that students were not entering college as prepared as they should. Only 26% of students who took the ACT test met all four of the exam's college readiness benchmarks and 31% of students did not meet any of the benchmarks. When students enroll in courses at the college level, they are expected to come with a minimum set of academic qualifications; college students, in general, are all taught in the same format, with little consideration of their individual needs (Healey & Jenkins, 2000). Gaertner and McClarty (2015) noted that if elementary and high schools are spending substantial time

assessing students, they are generally not capturing other characteristics such as motivation, learning style, and social engagement that may be integral to a student's success. The diversity of students in higher education classrooms continues to expand. Students come to colleges with varied backgrounds and experiences, and from a multitude of institutions with different teaching styles and philosophies. The changes in assessment and accountability have led many higher education educators to reconsider traditional and uniform instruction and instead consider learning styles of individual students and varying the delivery of content (Romanelli et al., 2009).

With the increase in college-readiness programs, the hope is that students enter higher education institutions prepared to put practical knowledge to use (Bailey, 2009). In a competitive job market, higher education intuitions desire the placement of candidates into the workforce who are prepared and primed to take on a job in their field of study after graduation. Turner and Danridge (2014) found that elementary and high school classrooms are placing a focus on collaboration, team-building, creativity, critical thinking, and communication skills. The American Management Association (2011) Critical Skills Survey identified these competencies as the top workplace skills to have in the next three to five years. "Critical thinking contributes to career success, but also to success in higher education" (Van Roekel, 2001, p. 8). Classrooms are focusing on these skills and our students, in theory, will be prepared to have intelligent and intellectual discussions when they reach the college years (Bailey). College students sitting in a lecture hall do not often utilize these critical thinking skills and future college students may be better served in interactive and collaborative classrooms (Blumberg, 2016).

Faculty at higher education institutions need to be prepared and trained on how to meet the needs of diverse learners and know how to guide and support them appropriately. The college students of tomorrow will be better equipped to know which learning style suits them best and it would behoove higher education faculty to know how to teach with varied delivery approaches such as collaborative learning, activity-based learning, integrated learning, and teaching to students' varied learning styles (Elliott & Oliver, 2016; Gaertner & McClarty, 2015; Healey & Jenkins, 2000; Romanelli et al., 2009; Turner & Danridge, 2014; Van Roekel, 2001).

Higher education institutions have a vested interest in the current study. If there is no state requirement for teaching at the college level (Boyer, 1990) and many higher education institutions do not have programs in place for methodology and teaching training (Anderson & Adams, 1992), how are faculty members learning how to teach? Faculty members are relying on past experiences as students, experiences as researchers, working with mentors, trial and error, and other methods to learn (Kusch, 2016; Oleson & Hora, 2014). Faculty who participated in formal training exhibited an increase in student outcomes, positive teacher attitudes, and satisfaction with the job (Butcher & Stoncel, 2012; Dixon & Scott, 2003; McArthur, Earl, & Edwards, 2004; Postareff, Lindblom- Ylänne, & Nevgi, 2007; Stes, Min-Leliveld, Gijbels, & van Petegem, 2010).

Many factors determine a student's success in their college years. Faculty must be equipped and trained to handle the nuances of the 21st century college student. Further research is needed to study a faculty member's role in student success. Can a faculty member have an impact and improve the learning experience of his/her students based on his/her ability to deliver high-quality, engaging, and relevant instruction?

### Process to Accomplish

The purpose of the current study was to explore the relationship between the level of teacher methodology training a faculty member received and the level of student satisfaction, current course performance, and faculty sense of efficacy in teaching in order to explore the impact the methodology training had on these areas. The researcher adapted two surveys, one for higher education students, and one for higher education faculty members. The surveys were designed to produce a measurable comparison that was analyzed through statistical means. Faculty members who had prior teaching methodology training were surveyed, as well as faculty who had never received any training. Students in those teachers' classes also completed a survey.

The population consisted of university faculty members and their students in the United States. Surveys were distributed to university deans, as well as distributed to individual faculty members at other universities. The researcher also used snowball sampling to gather the data. The survey was distributed in the Fall of 2018. A separate survey was given to the students in each faculty member's class. The researcher wanted all different content areas to be represented in the study, and all types of faculty, full-time, and part-time.

Respondents, both students and faculty, filled out the questionnaire using an online survey. Each faculty member completed his or her survey first, followed by a distribution of the student survey link to his/her students. The faculty survey was adapted with permission from Rosensitto's (1999) dissertation survey and Tschannen-Moran and Woolfolk Hoy (2001) Teachers' Sense of Efficacy survey. The faculty survey focused on faculty sense of efficacy and faculty attitudes on the need for faculty development in the

area of teaching methodologies. The faculty survey was divided into four sections. Section one included questions intended to measure possible confounds to control for: subject area of the class, years of experience, how many times an instructor has taught the same course, type of institution. The purpose of Section two of the faculty survey was to determine the level of training that faculty members had previously received. Section three of the survey focused on the faculty members' attitude towards the need for faculty development in the area of teaching methodologies. Section four included questions, which assessed faculty sense of efficacy in delivering content to students.

The student survey was adapted with permission from the Purdue Instructor Course Evaluation Service (2011) and the Manual for the Use of the Motivated Strategies for Learning Questionnaire by Pintrich, Smith, Garcia, and McKeachie (1991). The student survey focused on student satisfaction with the following components: Section one included five identifying questions (Teacher Name, School, Age, Year of Student, Elective/Required Course); Section two focused on student performance; Section three of the student survey assessed student motivation; Section four of the student survey focused on student satisfaction.

### Summary

President John F. Kennedy (1961) introduced American Education Week and wrote in Proclamation 3422:

Let us think of education as the means of developing our greatest abilities, because in each of us there is a private hope and dream which, fulfilled, can be translated into benefit for everyone and greater strength for our Nation. (para. 7)

Higher education faculty members have a vested interest in finding those greatest abilities in their students. While research exists on the benefits of capitalizing upon students' individual abilities, using individualized instruction, and including activity-based and active learning practices in the higher education classroom, little research exists on the effectiveness of teacher training programs for higher education faculty members. The next chapter will review related scholarly work and research in the area of faculty development and training.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Introduction

Student success is generally weighed by student mastery of academic content, as well as measuring successful graduation rates. Faculty are the ones who determine the extent to which a student masters the content; therefore, faculty are vital to student success (Stevenson, Buchanan, & Sharpe, 2006). Stevenson, Buchanan, and Sharpe state that the potential impact a faculty member has far outweighs other impacts on a student at the college level. “Faculty can and must be expected to intentionally play a greater role in sustaining student persistence to degree completion” (Stevenson et al., p. 141). Little is known about the impact that instructional development has on a faculty member's daily teaching practice (Stes et al., 2010; Stevenson et al.).

In American education, a definite gap exists between the preparation experiences by elementary or secondary school teachers and the preparation experiences by college instructors (Boehrer & Sarkisian, 1985; Fink, 2013; Lewis, 2010; Milton, 1972; Osgood & York, 1992). “Unlike doctors and many other professionals, most college teachers practice on their clients without benefit of formal training” (Boehrer & Sarkisian, p. 15). According to Cahn (1978), American educators noted that in comparison to primary and secondary teachers, most higher education faculty members received minimal to no training in educational theory and methodology. Few faculty members received any type

of teacher training prior to teaching at the college level. Even though faculty are prepared as scholars, and not as teachers, there is the assumption that a terminal degree, and a terminal degree alone, is the license needed to teach at the college level (Lowenthal et al., 2012). Faculty are hired based on their area of expertise, not on their ability to share that knowledge with others (Boyer, 1990; Lowenthal et al., 2012; Stevenson et al., 2006).

The accepted route to become a higher education faculty member is through securing an advanced degree, usually a doctorate, in some specialized area. Knowledge of an academic discipline is the primary criteria for securing a position as a faculty member in higher education (Stevenson et al., 2006). Rosensitto (1999) declared, "Many graduate degree programs are still designed to only graduate individuals who can produce high levels of scholarship and research" (p. xxvi). Earning a Master's or Doctoral degree in a field of study is still considered the official credential for teaching at the college level. "By the time graduate students receive their degrees, they are well prepared to conduct research and write scholarly articles but usually are not prepared to teach a course in their subject area" (Rosensitto, p. 5). In most developed economies, teachers in higher education are not required to hold accredited teaching qualifications (Parsons et al., 2012). Osgood and York (1992) noted that requirements for elementary and secondary school teachers included taking extensive coursework in pedagogical theory and practice, yet at the college level, the only requirement to teach is the possession of a graduate degree in an academic discipline (Lewis, 2010). Though many colleges offer courses in teaching at the college level, none have developed a credited and mandatory graduate program specifically designed to prepare faculty members for teaching positions in higher education (Lewis).

When teachers believe the only way to improve teaching is to further develop content knowledge, teachers develop sophisticated levels of knowledge, but they have only simplistic knowledge of how to convey that material to others (Weimer, n.d.). “To imagine that content matters more than the process is to imagine that the car is more important than the road” (Weimer, p. 2). What we teach and how we teach are dependent upon one another. A faculty member could work to improve content knowledge, but if the methods used to convey that knowledge are not calculated, teaching and student mastery of content, may be ineffective. The best teachers do know their content, but they also know a lot about the process (Weimer). Although much of the literature indicates that higher education faculty members lack pedagogical knowledge and experience, few researchers have examined how these factors affect student learning (Pascarella, 2006). So how does a faculty member learn how to teach if there is no required faculty training program that covers teaching theory and pedagogy?

Course planning is an important faculty role requiring expertise and effective decision-making. Despite the importance of planning activities in the teaching-learning process, relatively little research has explored the process by which instructors in higher education plan their classes (Stark, 2000). Fink (2013), Milton (1972), Halpern and Hakel (2002), Hora and Ferrare (2012), and Oleson and Hora (2014) believed that teachers teach the way they were taught. Oleson and Hora, and Hora and Ferrare found that in addition to faculty teaching in the format they learned, faculty members also used experiences as researchers and prior experience interacting with other faculty members as methods by which a faculty member learned how to teach. Many instructors follow

disciplinary tradition and utilize department resources that play a role in making decisions about classroom instruction (Hora & Ferrare).

Hora and Ferrare (2012) conducted a mixed-methods case study to see what drove a faculty member's content delivery method, and the researchers wanted to see which delivery approaches faculty used. The case involved 57 undergraduate math and science instructors at three large research universities. The evidence collected in the current study included classroom observations using the Teaching Dimensions Observation Protocol (TDOP), a teacher evaluation tool, and a 17-question interview with each respondent. Researchers analyzed the data from the interview process and found that course syllabi strongly influenced course planning. At most institutions, the syllabi are created by curriculum committees, inherited from previous instructors, and shaped by the acquisition of knowledge. Faculty perceived that course syllabi provided the sequencing of material to teach but did not offer any suggestions of how to present the material. The faculty members independently determined how to best deliver the content to students. A faculty member's individual experiences as a student and teacher, disciplinary tradition, and department resources, played a role in making decisions about classroom instruction as well. The researchers revealed that different content areas used a lecture-based format along with different teaching formats.

Most practicing faculty members gained their teaching pedagogical knowledge through self-study, attendance at course workshops, networking, personal experiences as teaching assistants, on-the-job experience and practice, and trial-and-error (Fink, 2013; Kusch, 2016; Lewis, 2010). Kusch conducted a study that looked at the different methods faculty have utilized to learn how to teach. All 12 faculty members interviewed stated

that trial-and-error was one of the biggest ways the faculty member learned to teach others. All faculty in the study explained trial-and-error teaching as a process of trying instructional strategies and continually modifying strategies when the strategies did not work (Kusch). Aristotle's notion of phronesis, or the practical wisdom that comes from applying general principles or ideas to specific individual situations, is the basis for on-the-job training (Cooper, 2004).

Kusch (2016) stated that higher education institutions lack any clear understanding of how faculty learn to teach and that the key to increasing student achievement is to train highly skilled instructors. A study by Filkins and Doyle (2002) suggested the strongest predictors of student success are the classrooms where the faculty member largely engaged students in the material and encouraged collaboration among students. Kane et al. (2002) highlighted the importance of considering the beliefs and conceptions that faculty have about teaching, learning, and students when the faculty is engaged in professional development.

Einstein declared, "The significant problems we face cannot be solved at the same level of thinking we were at when we created them" (Einstein, trans. 1987). There is a paradigm shift happening in higher education. Until recently, colleges were viewed as institutions that existed to provide knowledge. College institutions are shifting toward the new paradigm that views college institutions existing to produce learning (Barr & Tagg, 1995). Under the old paradigm, colleges created complex structures to deliver vast amounts of information to many students at a time through the lecture format. "To say that the purpose of colleges is to provide instruction is like saying that General Motors'

business is to operate assembly lines or that the purpose of medical care is to fill hospital beds" (Barr & Tagg, p. 12).

Barr and Tagg (1995) stated it is becoming more and more difficult to meet the needs of the increasingly diverse population of students. Barr and Tagg believed that the method and the product are separate entities and the end governs the means. In an instructional paradigm, a college aims to transfer and deliver knowledge from faculty to students.

The rapid growth in the student population observed in higher education over the past 10–15 years in some countries has coincided with an increased recognition of student engagement and its value in developing knowledge. Active learning approaches have the potential to promote student engagement with lectures, but this becomes more challenging as class sizes increase (Exeter et al., 2010, p. 761).

Exeter et al. (2010) conducted a qualitative study to investigate current practices in teaching, learning, and assessment at the University of Auckland, New Zealand. The study included only courses with 1,000 or more students. The researchers aimed to determine if students in very large class sizes engaged with the faculty and course content as much as students with smaller class sizes. The researchers conducted semi-structured interviews with six course coordinators. The interviews with the course coordinators revealed details about the challenges of the teaching and learning processes with very large class sizes. Seven challenges emerged from the interviews: course management, engagement, lecturers, learning materials, student assessment, skills, and diversity. The results demonstrated that teaching techniques commonly associated with small-class sizes are effective in engaging large class sizes as well. Techniques commonly used in small

classrooms were problem-based learning, small-group discussions, and open question and answer sessions with students and teacher. The researchers discovered that using a broad array of teaching approaches, even in large classrooms, allowed teachers to optimize student engagement.

Currently, instructors are teaching knowledge and skills that work within contexts of today. A higher education institution must keep up with current events and research to determine if the same content, contexts, and assessments a faculty member is teaching will work in the future. Many students will end up in a position that does not yet exist in today's world. It is impossible for faculty members to know what declarative and procedural knowledge students of tomorrow will need (Halpern & Hakel, 2002).

Preparing for this unknown and rapidly changing future requires efficient learning, but also requires that students have the ability to think critically. "Lifelong learning is no longer just a slogan but a reality" (Halpern & Hakel, p. 37). Even graduated students will need to move into a student role at repeated points in their lives to keep up with changing times by updating skills and learning new concepts.

Barr and Tagg (1995) claimed that 21<sup>st</sup> century learning is an era of accountability. There is an accountability trend in elementary, middle, and high schools requiring teachers to demonstrate through assessment that students are showing growth (Jochim & McGuinn, 2016). In elementary and high schools, several states took away teacher unions and tenure, and have moved to merit pay systems in order to hold teachers accountable for student learning and retention of knowledge (Caine & Caine, 1991; Jochim & McGuinn), yet with an instruction paradigm, rather than a learning paradigm, there is no accountability for the college faculty member.

The current students in elementary, middle, and high schools grew up with this accountability, and if colleges continue to teach using an instructional paradigm, that accountability and growth of learning will no longer be measured in the college years (Barr & Tagg, 1995). “Some trainers are primarily orientated towards improving student learning, rather than towards improving teaching, and so their training is oriented towards changing teachers so that they, too, are oriented towards student learning rather than towards teaching as performance” (Gibbs & Coffey, 2004, p. 89). Research is needed to "describe and document classroom teaching in a way that maintains fidelity to its complex and dynamic nature, while also being able to discern the presence (or absence) of active learning modalities" (Hora, 2015, p.785).

Institutions of higher education are placing greater emphasis than ever before on quality teaching and student learning. Faculty now find themselves in a world where they are not only expected to be expert researchers, but expert teachers as well (Lowenthal et al., 2012). Instructional training can increase the extent to which teachers adopt a student focus (Stes et al., 2010). Gibbs and Coffey (2004) revealed that teachers who participated in teaching theory and methodology training adopted a student-centered approach more frequently than their colleagues who did not participate. The researchers stated it is important that teachers are involved in teaching theory and methodology training at the beginning of their career to enhance desired changes in teaching approach.

Improving student learning is now one of the most critical goals for the United States and other industrialized countries, but it is often ignored by many research scientists (Halpern & Hakel, 2002). Do college faculty members feel the need for pedagogical training to meet this goal?

Barnes (1984) revealed more than 70% of the college professors surveyed believed that teacher preparation courses should be included in academic doctoral degree programs. However, Barnes discovered the disciplines of education and psychology and those with prior formal training had statistically significant different scores, indicating that those were the groups most in favor of including teacher preparation courses in doctoral degree programs. Unfortunately, though, faculty participation in professional development is inconsistent (Lowenthal et al., 2012).

“Education needs fixing” (Halpern & Hakel, 2002, p. 37). In virtually every industrialized country, it has become increasingly clear that an educated population is the backbone and a key indicator of current and future economic health; it is essential to the future of every country; it is in the best interest of all nations to ensure that the public is educated (Halpern & Hakel).

### Defining the Role of a Faculty Member

What is the purpose of learning? Depending on who a person asks, the question can have a multitude of responses. Hallinger (2010) stated the purpose of learning is to produce graduates capable of using knowledge both globally and locally to solve problems within their organizations and in society. Stark (2000) found that faculty members describe teaching as: teaching students to think effectively, helping students to clarify values and make commitments, and helping students learn to make the world a better place to live.

Stark (2000) found that faculty members endorse one of three views of their academic discipline. In View 1, faculty members see the field as an organized body of knowledge, that is, an interrelated set of concepts, ideas, operations, and principles to be

transmitted to students. This viewpoint is most pronounced in biology, mathematics, nursing, and psychology courses. In View 2, faculty members view the class as a group of individuals exploring common related interests and values. This viewpoint is most pronounced in biology, history, literature, psychology, and sociology. In View 3, faculty members see the class as a set of skills to be mastered and applied. This viewpoint is most pronounced in English composition, mathematics, nursing, and romance languages.

Stark (2000) discovered that 50-60% of the faculty members in the study agreed that a part of a faculty member's job is to help students learn to make the world a better place. Thirty-five percent of faculty members felt a part of their job was to help students gain personal enrichment or prepare students directly for jobs. Faculty members define the role of teaching in various ways: transmitting concepts of the syllabus; transmitting the teacher's knowledge; helping students to acquire concepts of the syllabus; helping students to acquire teacher's knowledge; teaching students to develop conceptions; helping students change conceptions (Kane et al., 2002). Stes et al. (2010) mentioned different types of teachers: teachers as interactionists, teachers as information transmitters, and teachers as practical coaches. "Most attempts to improve teaching and learning in colleges have focused on the teacher's role as 'classroom actor' rather than as 'academic planner'" (Stark, 2000, p. 413). The lack of carefully specified definitions for teaching methods is problematic because it results in the absence of a shared view of what it means to teach in classrooms across higher education institutions (Menekse, Stump, Krause, & Chi, 2013).

## Defining Faculty Development

Faculty development is the widely used umbrella term that encompasses systematic efforts to increase the effectiveness of faculty members in all their professional roles (Lewis, 2010). “Faculty development is a primary means by which higher education can develop, promote, and encourage its human resources – full time as well as part-time” (Bojarczyk, 2008, p. 3). The definition has evolved over time to include instructional improvements, organization development, and personal development (Lewis). Halpern and Hakel (2002) believe that a question higher education administrators need to be asking when determining goals for professional development is, “How can we apply and extend our knowledge of how people think, learn, and remember to improve postsecondary learning—wherever it occurs—in colleges and universities, trade and professional schools, on the job, and in the home?” (p. 39). Faculty development programs with a focus on teaching theory and methodology help faculty members to develop skills in fostering a sense of community, increase the professionalism of faculty, and give faculty the knowledge and skills needed to educate a diverse student population (Halpern & Hakel).

The types of faculty development programs offered at different institutions varies. Nandan and Nandan (2012) completed a quantitative study by surveying 103 faculty from All India Council of Technical Education Institution in India. The first objective of the study was identifying the perceived areas of learning from faculty development programs. The second objective was to see if the results differed based on length of employment. Results identified the areas where learning takes place during faculty development as instructional development, institutional development, network

development, and professional development. Faculty members are reflective practitioners who learn best when given opportunity to reflect, collaborate, and problem solve with colleagues. The authors also found that results did not differ depending on length of employment.

Knowlton, Fogleman, Reichsman, and de Oliveira (2015) found another unique way of offering faculty development opportunities for higher education faculty. The researchers partnered higher education faculty with middle and high school faculty in this unique opportunity to encourage collaboration and idea sharing among the faculty of different educational levels. Survey results on higher education faculty involvement and attitudes indicate that the process of partnering college faculty with middle and high school faculty to be a valuable form of faculty professional development. Higher education faculty felt the work was a valuable professional experience and almost all faculty participants expressed an interest in further outreach activities. The higher education faculty were also able to convey directly to teachers what is expected of students at the college level. Fifty percent ( $n = 24$ ) of higher education faculty members reported positive changes in use of technology and inquiry in their college classes and 90% ( $n = 45$ ) felt the approaches to teaching could be used at the college level. Though both groups contributed to the project, the middle and high school teachers saw their role as making sure activities were grade appropriate, while higher education faculty saw their role as ensuring content was accurate and current.

A year after the collaboration was completed over half the respondents continued to communicate with their partner at least once every three months which suggests the partnerships built may be a foundation for lasting professional relationships (Knowlton et

al., 2015). Overall, faculty reported several positive outcomes including the ability to use their knowledge and passion about science, build a relationship with a teacher to share unique and valuable strengths, learn issues that incoming students face, and use what was learned to create new or revise existing college-level teaching material. A year after the study, four out of five of the higher education faculty reportedly used a strategy or teaching methodology that was learned through the collaboration with middle and high school teachers.

### History of Faculty Development

The history of faculty and professional development at the college level dates back to Harvard in 1880 when it was common practice for faculty to engage in sabbatical leaves to learn more about teaching at the college level. This is the oldest recorded model of faculty development in the United States (Lewis, 2010). In the first part of the 20<sup>th</sup> century, the focus for college faculty members was to keep up to date in the field by not only taking sabbatical leaves, but also completing advanced degrees, attending professional meetings, and conducting research (Bojarczyk, 2008; Lewis, 2010). At the end of the 1960s, only 40 to 50 higher education institutions had faculty development programs in place (Bojarczyk; Sullivan, 1983). In 1966, the University of Amsterdam started to offer a doctoral degree in andragogy, the practice of teaching adult learners. In 1973, Concordia University in Montreal began to offer a bachelor's degree in andragogy (Caruth & Caruth, 2013). During the 1970s, the baby boom generation were college students, which spurred the need for expansion, but at the same time, the economy was in a recession so students struggled to go to college. The recession limited a university's hiring capacity. The recession caused universities to struggle with maintaining positive

morale and contentment among faculty members and battled against having large staff turnovers (Lewis). Large staff turnover meant less time and resources to properly train faculty members.

Students in the late 1960's and early 1970's began to organize protests in an attempt to influence higher education institutions to take a closer look at some irrelevant courses and uninspiring teachers. These protests exposed the myth that all that was required to be a satisfactory teacher was to know the subject. Research began to show that effective teaching and learning were complex and it was a skill that needed to be taught (Gaff, 1994).

By 1975, 41% of all four-year institutions indicated that organized faculty development programs were in effect (Centra, 1976). Colleges began to see the need to ensure faculty members were knowledgeable on how to teach. Grants from private and public organizations were introduced in order to fund the efforts. The Danforth Foundation, Exxon Education Foundation, Lilly Endowment, W.K. Kellogg Foundation, and Andrew W. Mellon Foundation were early supporters. Federal agencies, especially the National Endowment for the Humanities, National Science Foundation, and the Fund for the Improvement of Postsecondary Education also showed early support (Gaff, 1994). Some programs focused on helping faculty members learn more about the teaching profession, about how students learn, instructional delivery, and values and beliefs about teaching. Other programs focused on the instructional processes, setting educational objectives, measuring achievements of goals, and the classroom being a supportive environment. The training helped faculty create group goals, improve relationships

among colleagues, and emphasize the importance of having trained administrators and department chairs who could support faculty members in their efforts as well (Gaff).

The 1980s brought the need for increasing the quality of general education courses, strengthening and assessing academic majors, incorporating global perspectives, and including more writing and critical thinking across the curriculum. Because of the need for curriculum changes, experts in the field were in demand, therefore, faculty development became more about the research and less about how to teach and deliver content (Gaff, 1994). The 1980s brought a new paradigm for faculty development that was triggered by the deteriorating condition of academic life including reduced clerical support, reduced travel budgets, and deferred maintenance. During the 1980s, there was a massive increase in the research revolving around academic burnout. In response, faculty development efforts broadened their scope to include personal dimensions of faculty life such as workshops on career consulting, wellness programs, and retirement planning (Lewis, 1996). The 1980s introduced the idea of having faculty development centers as a permanent institutional department of the college (Gaff). Some of the first institutions to set up a faculty development center were the University of Michigan with the Center for Research on Teaching and Learning and the University of Massachusetts's Clinic to Improve University Teaching (Lewis).

The 1990s brought demands for accountability in higher education since parents and legislators were concerned that students were not earning what they paid for in an education. Faculty development programs were established to help ensure graduates were being exposed to the best possible teaching and learning conditions (Lewis, 1996). One result of the changes put into practice was that some universities began establishing

training programs for graduate teaching assistants (TAs). The training programs included teachings about scope, sequence, process, goals, and effectiveness in instruction. Seminars and workshops focused on immediate practical problems and served the interest of the university, rather than addressing long-term career interests and teaching skills (Gaff).

Boyer (1990) called for an expanded definition of scholarship to include teaching and learning of the subject, not just research in the discipline. Boyer also wanted integrative scholarship that connected the field with other bodies of knowledge, and application of knowledge to solve social problems. Other priorities for faculty development were the establishment and retention of new faculty, multicultural sensitivity, leadership and support of department chairs, preparing TAs, assessment, holistic development of faculty, distance education, and preparation for adjunct faculty (Lewis, 1996).

Towards the end of the 20<sup>th</sup> century, the accountability movement became even greater. Bean (1998) described how decisions are made in education:

How do we talk about higher education now? This is the language I hear: efficiency, productivity, technology, credit hours generated, grants with overhead received, accountability, assessment, competition, costs, total quality management. This is not the language of education or morality or scholarship or learning or community; it is the language of counting, accountants, accountability, and, to a great or lesser extent, it is how we imagine our enterprise (p. 497).

Moving into the 21<sup>st</sup> century, Fink (2013) examined the current status of faculty development on an international scale. Fink developed a ranking scale to label and distinguish where institutions are in their respect to faculty development. Level 1 institutions had minimal faculty development activity on campus; currently prevalent in most parts of the world, but especially in Latin America, Africa, the Middle East, Asia, and most of southern and eastern Europe.

Level 2 institutions have limited faculty development that is voluntary for faculty members; commonplace in the United States, Germany, and in Thailand. For example, in the United States, 30-40% of two-year and 4-year institutions have an active faculty development program and participation in those programs is voluntary (Fink, 2013). At most campuses, about 20-35% of faculty members participate in such programs at a substantive level that could lead to changes in the way one teaches. For the purposes of Fink's research, substantial participation was defined as having 175-200 hours of work throughout the faculty development program by way of taking courses in teaching and learning, attending workshops, or developing teacher portfolios.

Level 3 institutions, proclaim universal and mandated participation for new teachers and have a long history of faculty development; commonplace in the six British Commonwealth countries (Canada, England, South Africa, Sri Lanka, Australia, and New Zealand) and five countries of northern Europe (Denmark, Finland, Norway, Sweden, and the Netherlands). The programs are mandated in the sense that faculty members must complete these programs before they are eligible for promotion.

Level 4 institutions have continuous faculty development opportunities where all postsecondary instructors are expected to participate. In most countries, achieving level 4

remains nothing more than an ideal in the minds of those passionate about faculty development. Lund University in Sweden requires faculty members to provide evidence of pedagogical competence as a requirement for becoming a fulltime professor.

“Promotion requires more than being a good teacher” (Fink, 2013, p. 4). Lund University also rewarded faculty with permanent salary increases; as well, departments with faculty members who had gone through the program received budget increases (Fink).

### Using Varied Teaching Approaches

A challenge that faculty members of very large classes face is ensuring that students are engaged with the course content (Exeter et al., 2010). Engaging students when class sizes are large involves two actors: teachers and students. The teachers must provide a course, which engages their students’ attention, and students must engage with the course content (McGroarty et al., 2004). The way that content is selected, arranged, and communicated to students affects student learning (Stark, 2000). Barr and Tagg (1995) stated:

In its briefest form, the paradigm that has governed our colleges is this: A college is an institution that exists to provide instruction. Subtly but profoundly we are shifting to a new paradigm: A college is an institution that exists to produce learning. This shift changes everything. It is both needed and wanted (pg. 12).

With large class sizes, the faculty member has challenges to face. Limited interaction exists between students and lecturers in the classroom and there is a high degree of anonymity, and very little connection between lecturer and student. Most often, the course is dominated by lecture (Exeter et al., 2010). The methods of delivering content tends to differ between disciplines. Lecture format with a PowerPoint

presentation and handouts tend to be more common in hard disciplines such as chemistry or medicine. In soft disciplines such as history and education, small group discussion is more common. Students in the hard disciplines need good memory and problem-solving skills. Students in the soft disciplines do not need good memory and problem-solving as much; rather, they need more critical thinking skills and the ability to express ideas, thoughts, and opinions, which are all characteristics that have the potential to result in a course with low levels of student motivation and satisfaction (Stes et al., 2010).

Lecturing can take many forms, but it is generally seen as a didactic approach to teaching that relies on an expert (the teacher) to impart wisdom and knowledge to a listener (the student). Faculty are also concerned about covering the entire contents of the syllabus so lecturing is often done at a fast pace, with minimal time to interact with students to see if they are understanding (Adedayo, 1998). The lecture method is often criticized for being too teacher-centered because it promotes minimal participation by students. Adedayo stated that lecturing often leads to inadequate development of skills and knowledge. The primary benefits of using lecture in the classroom are efficiency (particularly for delivering content to large groups of people), immediacy of the transfer of knowledge, and control over the content, flow, and class environment. Critics of using a lecture model say that the one-way flow of information from lecturer to student, and the perceived lack of engagement can lead to students having fleeting attention in class, poor attendance, and a teacher not connecting with the students in the class (Vrioni, 2011).

Large class lecture-approach learning is shown to provide rare opportunities for student engagement, interaction, transfer of knowledge, long-term retention, or motivation for further learning. Students are rarely asked to process their learning and

there is little discussion (Vrioni, 2011). Large class sizes at universities can make many active learning techniques seem daunting and impractical, especially to educators who are accustomed to lecture-based format of instruction (Linsey, Talley, White, Jensen, & Wood, 2009).

Hora (2015) stated that some active learning practices do not entirely exclude the use of lecturing, but instead aim for only a small part of class time that is devoted to lecture, ideally broken up into segments of no longer than ten minutes. Mathematics lectures are delivered in such a way without considering the knowledge that students have before they enter the classroom, the confidence level of students, or the behavior of students. The mathematics lecturer tends to go straight into the content, which consists of confusing definitions, processes, and theories, while the student's main role is to copy notes (Adedayo, 1998).

Does the method by which content is delivered matter? Ultimately, the lack of carefully specified definitions and research of varied teaching methods is an issue because it results in the absence of a shared view of what these methods mean in practice among the research community (Menekse et al., 2013). The new approaches to teaching are grounded in the constructivist theory. Among the foundations of the constructivism theory of learning are collaboration, group-think, and the engagement and interaction of learners (Taber, 2006). In constructivism, knowledge is actively constructed by the learner and not passively received from the outside. “Learning is something done by the learner, not something that is imposed on the learner” (Taber, p.131).

A faculty member has a choice in his or her method for instructional delivery and determining what is best for his or her learners. Some different approaches are flipped

learning, collaborative and group learning, learning through Socratic seminar, active and engaged learning practices, problem-based learning, activity-based learning, learning through case studies, simulations, discussion boards, journals, observations, jigsaw activities, and more (Kurt, 2017). In each of these methods, students are asked to prepare for class by reading the assigned materials ahead of time so students can come to class prepared to engage in class discussion and activity. The lecture portion of class is moved outside the classroom via technology so that in-class time can be spent actively engaged in the learning process with their peers (Kurt). Any lecturing that does happen in class is broken up into shortened lectures with discussions and activities interspersed.

Active learning refers to innovative student-centered instructional approaches that involve students as a part of the learning process. "The main constructs of active learning are the participation and the engagement of students with concrete learning experiences, knowledge construction of students via meaningful learning activities, and some degree of student interaction during the process" (Menekse et al., 2013, p. 347). Problem-based learning helps students determine what is known about a subject, which may vary among students, identifies potential resources, reports the learning back to the group or learners, and assesses progress in student learning (Westhues et al., 2014).

### Instructional Delivery Methods

Collaborative activities are effective in supporting student learning (Adedayo, 1998; Deignan, 2009; Kurt, 2017; Linsey et al., 2009; Menekse et al., 2013; Vrioni, 2011). Vrioni believes that in recent years, university lecturers transformed their delivery approaches to make them more interactive for students. Faculty members believed that deeper engagement and mastery of content came from active engagement and a

communicative climate within the class (Vrioni). A cooperative learning approach promotes higher level thinking, pro-social behavior, and a greater understanding of students with diverse learning needs, social needs, and adjustment needs (Vrioni). Active and engaged learning practices equip students to participate in a range of approaches and creative interventions and prepares students for practice in more complex and uncertain settings (Westhues et al.). A benefit of cooperative learning is that students work productively by sharing roles and tasks to construct knowledge together. Social and academic goals seem to be intimately linked. "Cooperative behavior is associated positively with academic success" (Vrioni, p.116).

Another benefit of using alternative instructional delivery methods is the ability of a faculty member to provide useful feedback to his or her students. By using activity-based learning strategies, a faculty member can obtain an authentic evaluation of the students' learning through observation and anecdotal records. Conversely, in a lecture-based classroom, the task of grading papers presents a great challenge to faculty members who want to provide useful feedback (Linsey et al, 2009).

Relatively few studies were conducted on the efficacy of the different instructional approaches and designs (Kurt, 2017), but there were studies that showed benefit to breaking away from a traditional lecture format. Being a part of a group gives motive to students to maintain membership. Cooperative learning also results in higher levels of group cohesion and a sense of belonging than does a traditional individualistic experience (Vrioni, 2011). The benefits of using different instructional approaches also includes having students with positive attitudes towards group learning (Vrioni).

## Adult Learning Needs

In the latter part of the twentieth century, students wondered if they really needed to finish high school; now students are realizing that a college degree has become the passport to the middle class (Halpern & Hakel, 2002). On many campuses, 18 to 22-year-old upper middle-class students are no longer dominating the higher education campus. Replacing this homogenous population are now part-time students, older students, students returning to school or making career changes, and students from ever-increasing ethnic, cultural, and socio-economically diverse backgrounds (Halpern & Hakel; Gaff, 1994). Students are often coming to college as inept readers, perhaps less efficient than their parents, but are often more knowledgeable with technology than their professors. The transition from pedagogical learning to andragogical learning when moving into the higher education setting is an area where further research is needed (Gaff).

The most significant difference between pedagogy and andragogy is the self-concept of the learner. The term pedagogy is derived from the Greek word *paid* meaning *child* and *agogus* meaning *leader of* (Knowles, Holton, Swanson, 2005). In pedagogy, the teacher is the leader and is responsible and accountable for all learning decisions such as what is to be taught, when it is to be taught, how to deliver the content, and how to ensure that learning took place (Caruth & Caruth, 2013). A child is a dependent learner until the point when he or she experiences the excitement of trying and deciding things for him or herself. As a child moves into adulthood, independence and self-direction develop.

Andragogy, or the methods and techniques used to teach adults, is based on the principle of teaching self-directed learners (Knowles, 1984). Andragogy encourages the relationship between the learner and the teacher and is the most widely accepted

comprehensive adult learning theory (Rosensitto, 1999). As people mature, according to the theory of andragogy, they rely on past experiences, then they feel the need to manage their own learning. Knowles stated that learning needs to be flexible as a learner's knowledge base increases; he proposed six principles in the Andragogy in Practice Model: the learner's need to know, self-concept, prior experience, readiness, orientation, and motivation.

Knowles (1984), an adult learning theorist, believed certain needs must be met; his theory for adult learners consists of five elements: 1. Self-concept: As a person matures, his or her self-concept moves from a dependent personality to one of a self-directed personality. 2. Adult Learner Experience: As adults mature, he or she accumulates a growing reservoir of experiences that become resources for learning. 3. Readiness to Learn: As a person matures, his or her readiness is developed more based on tasks of his or her social roles. 4. Orientation to Learning: Perspectives change from one of postponed application of knowledge to immediacy of application. Learning shifts from one of subject-centeredness to one of problem centeredness. 5. Motivation to Learn: As one matures, the motivation to learn becomes internal.

Knowles (1984) proposed that instruction should be task and problem-oriented, rather than learning through memorization or isolated learning. He believed learning should happen within the context of common tasks and that learners should use one another as sources of new knowledge. Knowles also believed teachers would benefit from accommodating the varied background of students.

When taking into consideration the needs of adult learners, a faculty member needs to understand the background of all students. Even the gender of students makes a

difference in the learning styles of the students; male and female students learn differently (Blouin et al., 2008). Using a single method for delivery of instruction, may simultaneously reward some students, while penalizing others. If a class is taught catering to primarily one type of learning style, it does not serve all students equally well. Blouin et al. believed teaching to different learning styles will optimize the learning process while simultaneously increasing expectations in terms of the overall intellectual content of a given course.

Another influence of an individual's preferred learning style is culture. Culture influences environmental perceptions, which, in some degree, determine the way in which information is processed and organized within the brain (Blouin et al. 2008). The storage, processing, and assimilation methods a student uses, all contribute to the new knowledge that is learned (Blouin et al., 2008; Caine & Caine, 1990). Learning challenges the structure of the brain; the more we learn, the more unique we become (Caine & Caine). Caine and Caine stated that educators who become aware of how the brain learns will be able to optimize the learning environment. The brain is a parallel processor meaning teachers need to give students a frame of reference to help engage all different parts of the brain and the brain even resists having meaningless patterns imposed on it. For teaching to be effective, a learner must be able to create meaningful and relevant patterns. Vocabulary from all contexts, equations, and scientific principles are best understood and mastered when they are incorporated in genuine, whole language experiences. "Learning is as natural as breathing, and it is possible to either inhibit or facilitate it" (Caine & Caine, p. 66).

External factors such as inadequate financing, poor social integration, and institutional sensitivity to student needs are some barriers that a faculty member should be aware of in order to assist and support a student in finding help (Peter, 2005). Internal factors may also affect student achievement. Some of these factors include: poor study habits; test-taking anxiety; insufficient test-taking skills; minimal reading comprehension; inadequate goal setting; lack of time management skills; and lack of motivation. These students may study primarily to get better grades, not because they value their learning (Peter). Because of this heightened concern for grades, mixed with poor learning skills, students reported high levels of stress and feelings of low self-esteem, putting students at risk for poor academic performance (Peter).

Faculty must create a learning environment that enhances and challenges the brain's capabilities. The environment should be "low in threat and high in challenge" (Caine & Caine, 1990, p. 69). Most elementary school classrooms have pictures, charts, graphics, and colors in the room, all of which stimulate the brain. The brain absorbs information and signals that lie beyond the immediate focus of attention. If a faculty member is lecturing in a stark, cold, white classroom, the instructor is not utilizing the indirect learning that happens within the brain. The environment should provide stability and familiarity, but at the same time be able to satisfy the brain's hunger and curiosity for novelty, discovery, and challenge (Caine & Caine). The brain learns best with what one experiences, not just what one is told, which supports the idea of activity based learning and active learning strategies in the classroom. Facts and skills in isolation, as those in a lecture, are organized differently by the brain. "All new information must be worked on before it is stored" (Caine & Caine, p. 68).

The brain is always working, engaged, and inexhaustible. Knowledge is enriched over time as we increase our repertoire of natural categories and procedures. If one looks at native language, "there was a time when we did not know what a tree or television was" (Caine & Caine, 1990, p. 68). Native language is learned through multiple interactive experiences involving grammar, context, and vocabulary and is shaped by internal processes, social interactions, and repetitive use (Vygotsky, 1978). To help students develop context, faculty members need to provide students with multiple interactive experience through active learning practices. Faculty members can create an engaging classroom environment by simulating real-world experiences, using collaborative learning, visual imagery, projects, field trips, metaphors, drama, demonstrations, and other varied methods. Faculty should not exclude lectures and analysis; rather, they should make them a part of the larger experience (Caine & Caine). When faculty members rely largely on lecture and rote memorization to deliver content knowledge, individual needs are rarely met (Elliott & Oliver, 2016).

### Meeting the Needs of All Learners

The learners of tomorrow's college classroom are attending elementary and high school classrooms that look very different than just a few years ago. Teachers of tomorrow's college students are catering instruction to fit the needs of students. This shift in educational modality is inconsistent with the learning models with which most older students and adult learners are accustomed to from their primary and high school education (Romanelli et al., 2009). Milton (1972) also agreed that the style of learning that elementary and high school students are accustomed to, have been neglected and abandoned to traditional methods in the college years; he believed there was benefit to

teaching students in all different modalities, both what students are accustomed to, and traditional methods.

The concept of using a menu of modalities for delivering content is based on the thought that if a faculty member uses a variety of instructional delivery methods, the presentation of content will be more suited to every type of learner within a given classroom (Romanelli et al., 2009). Altbach, Berdahl, and Gumport (2005) stated that college curriculum is a living, breathing organism and should be permitted to expand, to grow, and to develop. The curriculum is not static and cannot be set in stone. Knowledge bases increase, the needs of the society change, and interests of students and faculty adapt. Differentiating, or personalizing instruction, involves the identification of the needs and preferences of learners and the organization of instruction that is meaningful and relevant to a student's learning (Keefe, 2007). Many students enter college under-prepared by their secondary school experience (Stevenson et al., 2006). A large population of students are lacking in comprehension skills which involves reflection, prediction, interpretation, explanation, justification, and verification. College students should know the how and why behind the content knowledge (Lord, 2007). Each student has a set of unique strengths, challenges, and skills that can be of value to other learners in the classroom, as learners can build in conjunction with one another in a dynamic classroom (Oleson & Hora, 2014).

Opdecam, Everaert, Keer, and Buysschaert (2014) conducted a quantitative study examining adult learner choice in the delivery of instruction. The researchers stated that giving adult learners a choice in their learning is important and the researchers aimed to investigate student preference for team learning and the effectiveness of team learning,

compared to a lecture-based format. The researchers followed 291 first-year undergraduate students at an unnamed university. Students chose either a team-learning or lecture-based format for their accounting course. The researchers gave both groups a pre-test and posttest to compare growth. In the team-learning format, the instructor set the learning tasks, monitored the functions of the teams set up within the class, and provided feedback when necessary, as compared to the lecture-based format, the instructor served as the primary and only source of providing information to students.

Opdecam et al. (2014) discovered that female students had a higher preference for team learning than male students. The researchers also discovered that students with a preference for team learning had a lower ability level, were more intrinsically motivated, had less control of their learning beliefs, were more help-seeking, and were more willing to share their knowledge with peers. Results also showed the team-learning approach increased performance, compared to the lecture-based format.

Faculty assume that their own experience and delivery approach is effective for all students. Examining learning styles might be one area for faculty exploration in the classroom when student academic achievement does not prevail (Stevenson et al., 2006). College faculty may rely on outdated and ineffective teaching strategies, not recognizing students' individual learning needs, resulting in adverse ability to achieve learning goals (Elliott & Oliver, 2016).

Weimer (n.d.) studied the effects of not giving students a choice and not meeting the needs of individual students. The researcher stated that one of the most harmful effects of faculty using lecture as the primary method of delivering content is that the professor removes from students the joy of realizing solutions for themselves. Weimer

believes that the best higher education faculty members will have at their disposal, a repertoire of instructional methods, strategies, and approaches and that a varied repertoire will continually grow and develop, just as the content knowledge in the discipline is developed. It is through discovery learning that lasting understanding and true learning are achieved (Lord, 2007). Using traditional ways of teaching only supports lower levels of learning (understanding and remembering); students do not retain knowledge for very long and are unable to use new knowledge in new situations. Students also tend to not develop outcomes such as the ability to think critically, as well as be curious and self-directed learners (Fink, 2013).

Some research has focused on the benefits of teachers profiling students so the instructor has a better understanding of their cohort of students. (Romanelli et al., 2009). “It is incumbent on educators to meet students where they are – academically, socially, and psychologically” (Stevenson, Buchanan, & Sharpe, 2006, p. 146). An understanding and appreciation of one’s individual learning style requires self-reflection. In deciding to implement a variety of learning styles within the higher education classroom, faculty members should be cautious when adding activities. When varying instruction for learning styles, ideas and concepts must be carefully connected, orchestrated, and delivered (Romanelli et al.).

In the flipped approach, in which some of the learning begins at home through online lectures and tutorials, students are invited to learn according to their needs and preferences. Students can rewind or fast-forward an online lecture to review the materials shared prior to class and decide on their own pacing. In the classroom, teachers have more time to guide students and give them differentiated feedback (Berrett, 2012). Caruth

and Caruth (2013) believed that surveying adults on their learning style in the college classroom, followed by an in-depth look into the course content to determine what can and cannot be taught using andragogical methods, is a simple way to meet the needs of the adult learner. Changes made to the curriculum and assessing learner's needs will increase the course's viability and extend its life-span. In institutions where faculty are catering to student needs, faculty are well informed of who their students are, including their learning needs, styles, individual talents, and student weaknesses (Stevenson et al., 2006). "They never underestimate the power of the process to determine the outcome" (Weimer, n. d., p. 2).

Schools have made attempts at ensuring faculty are meeting the needs of all students. The University of South Carolina Nursing Program developed a learner assisted program in their research known as Learn for Success (LFS) based on Pintrich and Schrauben's learning model (Peter, 2005). The LFS program was designed to decrease attrition rates and increase success rates by assigning students a trained faculty coach who was knowledgeable on meeting students' individual academic and social needs. The program trained coaches to deliver the message that learning is a function of skill, will, and self-management. The primary goal of coaches was to assist students to improve their academic performance by teaching them how to select and use learning and motivational strategies and self-management skills, which improved learning (Peter). Many times, at risk students may not seek help. Faulty coaches were trained to identify these students so faculty could offer support without being asked. As a result of the LFS program, 95% ( $n = 38$ ) of the class was retained, and 93% ( $n = 37$ ) earned a grade of C or better, compared to retaining only 50% ( $n = 20$ ) of students before the program (Peter).

Tomorrow's students have different learning needs than in years past. Technology may also influence the learning styles of students, as new technological advances are molding students entering into higher education (Altbach et al., 2005; Blouin et al., 2008; Romanelli et al., 2009). The Millennial Generation has been described as more technologically advanced than the Generation X students, and younger students are accustomed to having technology as a large part of how they obtain new information. Other differences in the new generation of students are the use of enhanced and often portable visual images, various computer and television games, computers, tablets, MP3 devices, smart phones, and other technologies (Blouin et al.). Faculty members now have the capabilities to take learning outside the physical walls of a classroom.

Student mindsets in a classroom can also vary among learners. A growth mindset is the belief that intelligence can be developed, whereas a fixed mindset, is the belief that intelligence cannot be changed (Bryant, 2013). Students with a growth mindset achieve more than those with a fixed mindset and they readily take on challenges, have more persistence, and can learn from constructive criticism (Bennett, 2017). Faculty members need to take time to reflect on their own attitudes about learning so that they can see if they need to change their own mindset. Faculty members should keep their expectations high and help students take academic risks by asking higher order thinking questions and allowing students the time to respond (Bennett). Another way to support growth mindset is to provide new learning experiences to the students to allow them to develop brain growth and to make new memory connections (Bryant; Caine & Caine, 1990).

Lischka et al. (2015) conducted a qualitative case study investigating the role of mindset as elementary teachers participated in professional development focusing on

mathematics. The study took place over a ten-day summer institute with four rural school districts in a southern state. Researchers collected a variety of data including observation of teachers in collaborative group settings, and interviews on working with successful and struggling students. The researchers challenged teachers with a new strategy for solving multiplication and division fraction problems with models. The researchers observed two different teachers and their approach with the new material. The researchers found that teachers responded in very different ways when presented with the uncomfortable feelings associated with not knowing how to solve a problem. The growth-mindset teacher saw the task as an additional process for students to learn; the fixed-mindset teacher felt that struggling students would not hold the potential for understanding math and should instead focus on procedural knowledge, rather than conceptual knowledge. A person with a fixed mindset will avoid the struggle, whereas a growth mindset will view a new challenge as a productive struggle (Lischka et al.).

Some researchers suggest that given the variability of learning styles of the students in a class, students should be the ones to adapt their learning style to coincide with that of the instruction style (Blouin et al., 2008). This approach allows the instructor to teach from his or her own strength, giving the students the best instruction they know possible. Students who have knowledge of their own learning style are empowered to use other techniques to enhance their learning experience, which may impact overall student satisfaction and student success in the course. The ability to use other learning styles is particularly critical when an instructor has a teaching style that is different from a student's learning style (Romanelli et al., 2009). The unilateral approach of content being delivered in only one style of learning receives criticism because it places all of the

responsibility of aligning teaching and learning onto the student. Blouin et al. stated that when content is presented in a format that is different from one's learning style, students may spend more time manipulating the information, therefore a student's exposure and use of the information will be with a greater capacity. The mismatched teaching and learning style might challenge a student to grow intellectually and critically, and learn in more integrated ways. However, it may be difficult for some students who do not have the capacity to adjust, particularly in classrooms with significant gaps in knowledge, or when the concept is new for students (Blouin et al.).

### Absenteeism

What good are varied delivery approaches and teaching to different learning styles if students are absent? Even highly rated, award-winning faculty members report that 25% or more students are absent from classes on any given day (Friedman, Kurlaender, & Ommeren, 2001). Does an instructor's engagement and delivery approach have an impact on student attendance? There is a clear distinction between a type of voluntary absenteeism and some kind of involuntary absenteeism (Lopez-Bonilla & Lopez-Bonilla, 2015). Friedman et al. (2014) asked 50 freshmen to compile a list of reasons for absences. After the list was compiled and duplicates removed, there were 247 reasons; subsequently, 333 students rated how often they were absent for those 247 reasons. The researchers revealed that smaller classes tended to have fewer attendance problems. Students reported that in smaller classes there were more opportunities to participate, the faculty members noticed and cared when students were absent, and that being absent may affect a student's grade (Friedman et al.). The researchers discovered a positive correlation between a faculty member's utilization of active learning strategies

and a student's attendance in class. Conversely, when a faculty member does not provide lively, meaningful instruction, absences increase.

Moore et al. (2008) conducted a similar study where 230 students were asked to complete a survey in which they had to recall an absence and list the reason for the absence. Responses were coded into one of three categories: signals of high student motivation (absence due to sickness or bereavement), signals of medium student motivation (absence due to other priorities), and signals of low student motivation (absence due to trivial, low-quality reasons). The results revealed over 60% ( $n = 138$ ) of the responses were reasons of low student motivation and 23% ( $n = 59$ ) were of medium student motivation.

In another study, Lopez-Bonilla and Lopez-Bonilla (2015) conducted research asking 125 students to rank the top reasons for the most recent absence. Seven determining factors of absenteeism were obtained in the study: efficiency, teaching style, academic interest, teaching contents and format, classmates influence and fears, imponderables, and convenience. Outside of health, weather, or bereavement issues, the most referenced open-ended responses were the monotony of the lessons, a teacher's classroom methodology, a demotivated teacher, and the content being too easy.

#### Attitudes Towards Faculty Development

Having a disconnect between the lack of teaching preparation and the expectations to be an exceptional teacher puts faculty and administrators at odds with one another. Institutions of higher education, however, have begun to turn to faculty development as a possible way to improve teaching and learning but researcher shows that faculty participation in development opportunities is low and inconsistent

(Lowenthal et al., 2012). Administrators have struggled with ways to attract faculty to be more active participants in completing professional development in the area of teaching methodology and pedagogy (Lowenthal et al., 2012). As an academic department's budget decreases, full-time faculty members are often required to increase their course loads (Rosensitto, 1999). A lack of faculty enthusiasm is easy to understand due to faculty members' already over-scheduled workloads (Holyer, 1998; Rosensitto).

Even though participation in faculty development opportunities are not well-attended, Barnes (1984) indicated that more than 70% ( $n = 217$ ) of professors in all academic disciplines were in favor of preparing doctoral candidates to teach. Rosensitto (1999) similarly indicated that most (81.6%,  $n = 253$ ) of the professors in the study perceived a need for graduate programs to include formal curricula designed to prepare candidates to teach in higher education settings. The later study revealed an increase of more than 10% over the course of 15 years in faculty perception of the need for some kind of formal training.

Lowenthal et al. (2012) completed a mixed-methods study that examined the motivation of full-time and adjunct faculty across four institutions to seek development, obstacles to attending development opportunities, as well as preferred formats of faculty development. The authors used a survey designed to yield quantitative and qualitative data. The researchers sampled 524 full-time faculty and adjunct faculty from higher education institutions in the western United States. Lowenthal et al. undertook the study because the researchers believed that prior to the study, there had been a greater emphasis on quality teaching and student learning than in past years.

The researchers found that full-time faculty utilized more development opportunities than adjunct faculty across institutions. Full-time faculty tended to not value short workshops or online formats and instead preferred development through reading books, watching videos, or attending retreats. Adjunct faculty members reported that attending a one-hour workshop was a preferred method of obtaining professional development (Lowenthal et al, 2012).

The researchers also looked at faculty motivation in seeking out faculty development opportunities. Results indicated that out of tenured, tenure track, and non-tenure track faculty, 43%, or 225 faculty members, indicated stipends and 29%, or 151 faculty members, indicated receiving release time as the motivating factors for attending faculty development opportunities. Other motivating factors that did not rank as high were certificates (29% or 151 faculty members), promotion (20% or 104 faculty members), awards (17% or 89 faculty members), public recognition (8% or 41 faculty members), and letters of recognition (7% or 36 faculty members). Twenty-five percent of faculty, or 131 faculty members, sought out faculty development opportunities because of the requirement to participate in professional development. When professional development was not required, faculty listed the reasons for participating. Thirty-one percent of faculty, or 162 faculty members, participated because of the need to acquire teaching skills and 25% of faculty, or 131 faculty members, participated because the professional development had a technology focus. Only 5% of faculty members, or 26 faculty members, attended a faculty development workshop because of a promotion requirement and 4% of faculty, or 20 faculty members, participated because of monetary bonuses for attendance. Lowenthal et al. (2012) concluded that earning a stipend was an

important factor to consider and one that affected the results, because more faculty attended faculty development opportunities at the schools where faculty earned a stipend for attendance.

Lowenthal et al. (2012) examined obstacles that faculty encounter when participating in faculty development opportunities. Sixty-five percent of faculty, or 340 faculty members, stated the time of day of the event prevented the faculty from participating. Fifty-seven percent of faculty, or 298 faculty members, reported other competing priorities (family and personal obligations), 44% of faculty members, or 230 faculty, reported the lack of financial support from the instruction, 32%, or 167 faculty members, reported the location as a deciding factor, and 21%, or 110 faculty members, reported that lack of interesting topics were the reasons faculty did not participate in faculty development opportunities.

Lowenthal et al. (2012) concluded that academic institutions provided opportunities for faculty development as a way for instructors to improve their teaching and research skills and to foster career development. There were many different programs, models, and formats for faculty development, but the key to improving teaching and learning was to determine how to increase participation in these programs. Knowing faculty motivation and incentive to attend would be helpful in determining the best way to increase the number of faculty attending development opportunities.

Along with the Lowenthal et al. study (2012), an interesting subgroup to examine is that of the mid-career faculty, or faculty who are 10 to 15 years into their career. Lowenthal et al. stated that mid-career faculty tended to be disengaged even more so than other faculty members. Strage and Merdinger (2015) conducted a qualitative study to

determine the needs of mid-career faculty. The researchers sought to identify and provide the types of resources that enabled mid-career faculty to become "vital, engaged, and productive members of their professional communities" (Strage & Merdinger, p. 41). The researchers interviewed and analyzed the results of 47 faculty members who participated in a retreat program geared towards mid-career faculty. Participants were interviewed before, during and after the program.

Strage and Merdinger (2015) stated that over half of higher education faculty members nationwide are at mid-career. The researchers believed in the need to establish goals and find guidance along our personal and professional journey. Strage and Merdinger felt that mid-career faculty did not receive adequate support or recognition from their institutions, which was the cause for faculty to disengage. The researchers stated that mid-career faculty were often responsible for more than half of the teaching, research, and professional outreach conducted on their campuses. The researchers also stated that mid-career faculty were often called upon to assume difficult and unpopular roles, yet these faculty were often ineligible for many forms of faculty recognition or incentives, thus contributing to faculty stagnation. The retreat program, designed by the researchers, centered around activities related to avoiding stagnation, finding purpose, making meaningful contributions, striving for individual achievement, creating interpersonal relationships, and promoting growth-mindset over fixed-mindset.

Strage and Merdinger (2015) asked faculty members to reflect on the retreat. Over three-quarters of participants ( $n = 37$ , 79%) wrote about insights they had about themselves. Less than a third of participants ( $n = 14$ , 30%) wrote about insights related to peers and colleagues. Two to three months after the retreat, faculty agreed to an

individual follow up communication to ascertain whether any faculty put into practice any concepts learned during the retreat. Almost half ( $n = 19$ , 41.9%) had taken concrete steps to create opportunities for collegial interaction (regular lunches, coffee hours, writing groups, etc.). A third of participants ( $n = 15$ , 32.2%) described writing grants or disseminating their work. Nearly a quarter ( $n = 10$ , 22.6%) had taken concrete steps to secure opportunities for university service (seeking administrative positions, leadership positions on committees, or programmatic efforts to support junior faculty). Almost a fifth of participants ( $n = 9$ , 19.4%) had developed or revised curriculum based on what was learned in the retreat. Participants unanimously indicated that participating in the retreat was the motivation to make changes.

Strage and Merdinger (2015) suggested next steps to continue learning about the needs of mid-career faculty members. They suggested that universities offer specific professional renewal programs, promote collegial interaction, promote opportunities to give back and also suggested that administrators must also join in the process.

Some faculty have differing opinions on the need, purpose, and benefit for faculty development. Blumburg (2016) completed a qualitative study that interviewed 58 faculty members on the prevalence of using learning-centered teaching practices in a college classroom at University of the Sciences in Philadelphia. Data indicated that 14% (or 8 faculty members) interviewed used predominantly learning-centered techniques. The faculty members who used learning-centered techniques taught in the occupational therapy, physical therapy, chemistry, and philosophy disciplines. "It is very common for clinical faculty members to explain why, how, and even when students would be using scientific content or clinical skills" (Blumberg, p. 309). The researchers stated it was less

common for faculty in an English or humanities course to use learning-centered techniques. The faculty members in the study that used learning-centered techniques said they taught in that format because it was congruent with their personal teaching style and naturally fits with their discipline. Eight percent of faculty (or 4 faculty members) rejected the idea of using learning-centered techniques. The faculty who rejected the approach were all in the College of Arts and Sciences. The researcher also showed that younger faculty members were more open to utilizing learning-centered techniques than were the older faculty members. The researchers stated that the results of the study could encourage faculty members to "help students to appreciate the value of studying the content by discussing applications to the real world and how students can use the content in their personal lives or future careers" (Blumberg, p. 313). All faculty members mentioned in the interview made a deliberate decision to deliver content through learning centered approaches.

“Faculty development programs are effective only to the extent that individual professors are willing to make an effort to utilize new teaching techniques in the classroom” (Rosensitto, 1999, p. 5). If an organization does not support faculty development and innovation, then faculty members might not be inclined to make good use of new knowledge and skills acquired in development opportunities (Rosensitto).

#### Evaluation of Faculty Members

Stevenson et al. (2006) stated that teaching is the primary, but not sole responsibility of faculty, and typically carries the most weight in evaluation of faculty performance in consideration for promotion or tenure. Two other components often examined are a faculty member's research and service. The ultimate criteria for assessing

effectiveness in higher education should be “identifying critical points, correcting problems at critical points, making modifications at critical points for student success, and creating upward and forward pathways for student performance, persistence, and progress toward degree completion” (Stevenson et al., p. 145).

Boyer’s Model of Scholarship is widely used by higher education institutions as the basis for ensuring faculty members are staying active and engaged in their discipline (Boyer, Moser, Ream, & Braxton, 2016). Boyer’s Model is critical for highlighting that while there are expected mandates for scholars in higher education, such as remaining up to date in the field, remaining professionally active in the discipline, and earning credentials in research, it is also vital for a school to recognize the areas of creativity, innovation, and diversity in scholarship. Boyer’s Model includes four domains of scholarship: discovery, integration, application, and teaching and learning (Boyer, 1990).

Stevenson et al. (2006) stated that for purposes of evaluation, many universities have their faculty members conduct some sort of action research in order to either earn or maintain tenure. Action research is described as moving from a current pedagogical strategy to a new, more effective one and can be viewed as professional development, but through academic course development and improvement, instead of the traditional workshop or conference. Action research projects can help faculty members assess individual teaching styles and develop alternative methods of instruction. Using an action research project is a type of reflective and responsive teaching that is encouraged in Boyer’s Model of Scholarship.

Action research also provides opportunities for a faculty member to study individual student’s learning styles and needs and identify strategies that positively

impact student learning. The impact of various instructional techniques can be shared with colleagues and used to modify course instruction as indicated by the results of the research. Such action research projects or self-assessment projects not only supports the institution's campus-wide efforts to promote student success, but also gives faculty members an opportunity to publish scholarly work and further support Boyer's Model of Scholarship (Stevenson et al., 2006).

When considering evaluation of faculty, in recent times, there has been a dramatic increase in the number of adjunct faculty members in university classrooms across the nation (Bojarczyk, 2008; Langen, 2011). Rather than tenured, full-time faculty members teaching a course, it is likely that students will have an adjunct faculty member in the classroom, frequently someone who has a full-time position as a practitioner in the field of study (Langen). It is estimated that 67% of faculty at two-year colleges are adjuncts, or part-time faculty members (Gappa, Austin, & Trice, 2007). Many within higher education are concerned of the rapid growth and increase of adjunct faculty because of the possibility of lessened commitment, lower standards, loss of expertise, lack of basic understanding of the core curriculum, policies, and procedures (Bojarczyk). The researchers state that when adjunct faculty are given the opportunity to participate in relevant and meaningful professional development experiences, there is greater potential for faculty members to positively influence all aspects of the academic institution (Bojarczyk).

Due to decreasing budgets, colleges have resorted to raising tuition or cutting costs, so the use of adjuncts has been steadily increasing (Bojarczyk, 2008). Adjuncts constitute approximately 35% less than full-time faculty members, without consideration

of other financial savings for the institutions such as the cost of healthcare, benefits, and office space (Bojarczyk; Christensen, 2008). When institutions hire adjuncts as opposed to full-time faculty, there is also a greater degree of scheduling flexibility with adjuncts, as classes can be scheduled or canceled within a day's notice. Consideration needs to be given that there typically is minimal support in place to ease a new adjunct's transition and to ensure learning will occur in the classroom (Christensen).

Existing literature suggests that adjunct faculty members require integration and socialization into the academic environment (Bojarczyk, 2008). However, what is happening in higher education institutions is that there are generally no benefits for adjuncts, no salary increases, no paid office hours, no office space, and no camaraderie of fellow instructors that would normally be gained in the faculty office setting (Bojarczyk). Many of these factors contribute to the high turnover rate for adjunct instructors. With lack of training and support and because adjuncts almost always have another job besides being an adjunct, the Community College Survey of Student Engagement (2006) reported that 33% to 90% of faculty at community colleges spent little or no time facilitating group discussions or assigning in-class writing. A third of faculty reported they spent the majority of the time lecturing and almost two-thirds of all community college students stated that memorization of class material was a large feature of their classroom experience.

Another challenge is in the re-hire process of adjunct instructors (Christensen, 2008; Langen, 2011). Positive student evaluations, being a self-starter, and taking initiative are generally sufficient enough for an adjunct to be rehired. As a result, many are tempted to award higher grades than what was earned or make the course less

demanding in order to achieve higher ratings on course evaluations (Christensen). Langen also surveyed administration to find out what determines if an adjunct is reappointed to teach in a future semester. Ninety-five percent of respondents gave teaching performance a strong importance rating in deciding to reappoint a faculty, even though the researcher showed only 58% percent of administration placed a high importance on classroom observation. Other deciding factors for reappointment were student evaluation scores (79% or 122 administrators), faculty availability (75% or 116 administrators), and relevant work experience (72% or 111 administrator). "This raises the question: Are administrators reappointing faculty because they are excellent teachers or because they are available to teach the class" (Langen, p. 194)? Due to an increase in the number of part-time, adjunct faculty members, and the high turnover rates of higher education faculty members, evaluation of faculty will be regarded as an important focus for higher education institutions (Hallinger, 2010; Hora, 2015; Langen).

Universities throughout the world find themselves competing to keep ahead of other schools, and even excel beyond both local and global competing higher education institutions, but few higher education institutions have evaluation systems in place to assess if an organization is meeting goals and taking steps towards improvement (Hallinger, 2010). Guidelines for faculty appointment, promotion, and tenure need to be appropriately identified, recognized, and rewarded (Razek & Awad, 2011).

Chen and Yeager (2011) conducted a mixed-methods study for faculty evaluation of teaching practices to examine the specific practices adopted by top-tier Chinese Higher Education Institutions (HEIs) and American prestigious universities specifically looking at how rewards played a part in faculty tenure, promotion, and engagement. The study

included a comparison between eight American institutions and 39 Chinese HEIs. Chen and Yeager discovered that both Chinese and American universities have evaluations with summative and formative purposes, but Chinese summative evaluations made faculty eligible for awards. The researchers found the forms of evaluation were very different between the two countries. In America, peer evaluation plays a major role, whereas in China, it is an expert in the field who completes the evaluation. In America, course evaluations are optional for students, whereas in China, student participation is required.

Chen and Yeager (2011) stated that although there are no national guidelines for evaluation for American higher education institutions to follow, America largely bases policies and practices on well-established research results and literature. Chinese universities have a more identifiable pattern regarding teaching evaluations since policies were issued by the government. The researchers recommended: having an expert evaluator, but also reinforcing the practice of peer evaluation; making participation voluntary, but providing incentives to those who choose to participate; and allowing institutions to set their own criteria, standards, and instruments for evaluating teachers (Chen & Yeager).

Hallinger (2010), Hora (2015) and Langen (2011) believed that dedicated, passionate, and committed faculty are an integral part in any college classroom and higher education administration should place value on quality learning in all classrooms. Administration has an interest in ensuring that the entire faculty body develops, grows, and prospers as faculty members (Bojarczyk, 2008). Understanding evaluation practices and having effective evaluation tools will help organizations have assurance of the

quality of education students are receiving. The evaluation of learning and the effectiveness of teaching is an area where more research is needed (Hallinger; Langen).

Langen (2011) conducted a mixed-methods study in the area of current evaluation practices. The researcher set a goal to develop a better understanding of current evaluation practices and to ensure quality learning opportunities were available in the classroom. The researcher studied higher education institutions in the state of Michigan that included 155 administrators from 26 different higher education institutions. Langen revealed that 20% (or 5 institutions) did not require regular or scheduled evaluations of adjunct faculty members. Seven percent (or 2 institutions) did not require any evaluation of adjunct faculty members. Interestingly, when asked which of the evaluation methods was the most accurate for evaluating a faculty member, administrators gave classroom observation the highest mean rating (scored 5 on a 6-point scale), but the study also found that few institutions conduct classroom evaluations. The researcher revealed that institutions largely use student surveys (87% or 134 administrators) as the method of evaluating adjunct faculty. Syllabus reviews, review of teaching materials, peer evaluation, grade reviews, and instructor self-evaluation were among the less popular options for evaluating faculty (Langen).

Classroom observations are used across the educational spectrum from elementary to post-secondary institutions, but the evaluation tools are more clearly defined and are tested with more rigor in K-12 settings than in higher education settings (Hora, 2015; Kane et al., 2002). Evaluations in the higher education setting are often conducted using unstructured rubrics, unclear procedure or direction, or anecdotal notes by an observer with little to no formal direction or training. Research that examines only

what university teachers declare versus what teachers actually do is at risk of falsely representing the research (Kane et al.). As the interest in the quality and efficiency of higher education institutions has increased in recent years, more structured protocols were introduced.

The Teaching Behaviors Inventory (TBI) was one of the first widely used protocols in higher education settings to evaluate the faculty. The TBI is a 60-item instrument composed of eight categories of teaching that require an observer to assess a faculty member on a five-point scale ranging from almost never observed to almost always observed (Murray, 1983). Another instrument is the Reformed Teaching Observation Protocol (RTOP). The RTOP consists of 25-items scored at the end of a course, which can be used to classify a faculty member in one of five categories. Two of the categories represent teacher-centered classrooms and three categories represent learner-centered classrooms (Ebert-May et al., 2011). Hora (2015) agreed that a need exists in the higher education field for more rigorous methods to evaluate teaching.

Hora (2015) combined the Teaching Dimensions Observations Protocol (TDOP) evaluation tool and the Differentiated Overt Learning Activities (DOLA) framework in his examination of the faculty teaching practices. The TDOP is a faculty evaluation tool created in 2008 that has been widely adopted by higher education institutions as a means to evaluate faculty. The TDOP includes specific descriptors of classroom dynamics, interactions between students and faculty, and resources faculty members may use in classes. The DOLA framework is a collection of classroom-based active learning modalities derived from observable student behaviors. The framework classifies learning activities as interactive, constructive, or active. Hora used the DOLA framework to

organize combinations of TDOP codes to be able to analyze and evaluate the faculty to see what type of delivery instruction was used in the classrooms. This information was helpful for administrators to see the types of instruction happening in classrooms.

Hallinger (2010) also recognized the importance of faculty evaluations in higher education. Unlike Hora (2015) who combined pre-existing higher education evaluation tools, Hallinger designed and utilized an analytical rubric for assessment of faculty performance and developed a more rigorous and detailed faculty evaluation system at a graduate school of business in Thailand. During the period of the study, 233 different instructors taught 1,739 course sections to 40,686 students, of which 33,896 students participated over the course of 21 terms. The rubric incorporated three domains of faculty performance: teaching, research, and service. Faculty completed the rubric before an evaluation and submitted it with a short narrative and relevant supporting documents to their supervisor who completed the evaluation. The final assessment took place after a meeting with both the Academic Director and faculty member. The Academic Director gave direct feedback to the faculty member prior to the start of each succeeding term, and joint problem-solving was standard practice if a faculty member fell below expectations. Top performing faculty members were awarded with a higher annual raise (as much as 10% increase) than lower performing faculty. High-performing faculty were awarded through bonuses and teaching excellence ceremonies, based largely, but not wholly, on faculty evaluation.

Hallinger (2010) discovered statistically significant improvement in instructor effectiveness and faculty turnover after the implementation of the new program. On a six-point scale, the mean for Instructor Effectiveness rose from 3.84 to 4.2 throughout the

duration of the study. Results of the end-of-course survey also demonstrated a higher rate of passage as well; therefore, the researcher suggested that improvement in instructor effectiveness could be characterized as substantial, significant, and meaningful. The researcher also found that during the first four terms of implementation, faculty turnover rate was at 25% per term. By term five, turnover rate was reduced to 10% and maintained at this level for the duration of the study.

Students' evaluation of faculty and course content continue to be the most often used gauge of how well courses are taught in higher education (Culver, 2010). However, end-of-semester surveys and evaluations should not serve as the sole source for student satisfaction (Stevenson et al., 2006). Culver found that newer research on student engagement suggested that students' own interaction with the course material determines their evaluation of the course. Culver conducted a quantitative study to examine 1. whether the grades students expected in a course affected the overall evaluation of the instructor, 2. whether the students' quality of engagement in the course affected the overall evaluation of the instructor, and 3. whether students' quality of engagement played a factor in the overall evaluation of a faculty member.

Surveys collected were from 350,846 students over the course of 10 semesters at a state-supported university in southeastern United States. Students completed end-of-course surveys that included 16 questions divided into three sections: instructor ratings, course ratings, and course descriptors. In the instructor ratings category, instructors were rated on six characteristics: apparent knowledge of subject matter, success in communicating or explaining subject matter, degree to which subject matter was made stimulating or relevant, concern and respect for students as individuals, fairness in

assigning grades and administration of the class, and organization of materials. The researcher discovered that higher workload levels and more difficult courses were associated with low ratings from students. Further findings determined that the higher the engagement level of the student, the better rating the faculty received and a students' engagement with the course material significantly influenced the relationship between expected grades and overall rating of the instructor (Culver, 2010).

“The elements of faculty persistence toward professional advancement paralleled by student persistence toward success certainly create mutual benefit for both faculty and students in the modern learning community” (Stevenson et al., 2006, p. 145). Researchers agree that a more consistent and clearly defined evaluation tool is needed for higher education faculty (Culver, 2010; Hallinger, 2010; Hora, 2015; Stevenson et al.).

### Efficacy in Teaching

Teaching is connected with a variety of emotions, but research in this area is scarce in the field of higher education. (Postareff et al., 2007). When examining higher education faculty members, Sadler (2009) found that confidence was regularly described in relation to content and pedagogical knowledge, with content knowledge as the primary source of confidence. If faculty members perceived they had high content knowledge, confidence levels tended to be high. “The most immediate threat to self-esteem comes from the discrepancy between this assumption that one knows how to teach and the discovery that one does not” (Boehrer & Sarkisian, 1985, p. 15).

Teacher efficacy is a judgement of his or her capabilities to bring desired outcomes and learning (Tschannen-Moran & Hoy, 2001). “Teacher efficacy has proved to be powerfully related to many meaningful educational outcomes such as teachers’

persistence, enthusiasm, commitment, and instructional behavior, as well as outcomes such as achievement, motivation, and self-efficacy beliefs” (Tschannen-Moran & Hoy, p. 783). Studies of teacher efficacy have frequently found two different factors: personal teaching efficacy and general teaching efficacy. Personal teaching efficacy has to do with one’s own feelings of competence as a teacher. General teaching efficacy, often called by other names such as external influences, or outcome expectancy, deals with a faculty member’s assessment of the likely consequence of the performance level he or she expects to achieve (Tschannen-Moran & Hoy).

Higher education faculty members who have gone through variations of faculty development training program stated the most helpful piece of the training in reference to increasing confidence was the instruction of how to develop a course syllabus, how to create assignments, and how to design exams (Bojarczyk, 2008). Wurgler, VanHeuvelen, Rohrman, Loehr, and Grace (2013) found that higher education institutions that have teacher training and pedagogy training in place have many benefits, including faculty members who participate in the programs generally feel more confident and better equipped to teach in an academic program. The researchers set a goal of fostering job readiness among graduate students interested in teaching in higher education. The researchers found that 22 out of 24 (or 92%) of participants felt that participating in the training gave them valuable tools, knowledge and experience, and increased their understanding of pedagogical issues. Qualitative analyses of the program showed that participants in the training had a greater sense of competence in their first teaching jobs than did their counterparts with no training. (Wurgler et al.).

Postareff et al. (2007) implied that when higher education faculty members used a more student-centered delivery format, they also had a greater level of self-efficacy. Conversely, when faculty used a more a more teacher-centered delivery format, self-efficacy beliefs were lower. The researchers stated that teachers with a more student-centered approach to teaching presumably had greater self-efficacy due to the type of delivery approach of the teacher (Postareff et al.; Gordon, Petocz, & Reid, 2007).

Postareff et al. (2007) conducted a qualitative study of 97 faculty members to explored emotions and faculty confidence in teaching. Of the 97 faculty members, 92 described some form of emotion in the interview; positive emotions were described more often than negative emotions. The researchers found that the cause for low confidence was often because of a lack of teaching skill, rather than mastery of the content. Of the faculty members who participated in the interview, 56 faculty members participated in additional pedagogical training, while 37 had no pedagogical training. After completing faculty development on pedagogical methods, one third of the faculty members in the study stated that the training had improved their awareness of pedagogical issues, which made them more confident as teachers. When describing the effects of pedagogical training, almost all faculty members in the group described an increase in their confidence to teach; several faculty recognized inadequate preparation for teaching.

Tschannen-Moran and Hoy (2001) believed there are exciting possibilities ahead as more is learned about efficacy in teaching. The researchers stated that if beliefs in the capabilities of efficacy were taken seriously, it could bring on changes in the way faculty members were prepared and supported in the classroom, particularly in the early years in the profession (Tschannen-Moran & Hoy). “The professional development of teachers

would be structured as powerful mastery experiences with an eye toward helping teachers garner evidence of improved learning on the part of their students in order to reap the efficacy pay-off that would result” (Tschannen-Moran & Hoy, p. 803).

### Existing Programs

A rising trend of higher education institution promotes and delivers teaching pedagogical strategies, but programs vastly differ from one another. The variety of programs that have emerged are predominately institutional-created programs, some nationally supported programs, and some subject-focused initiatives, including some emerging areas for public policy (Parsons et al., 2012). Schools that have developed their own programs have evolved independently but with some commonalities. Schools that do have a plan in place are often formal, and sometimes mandatory training, but the programs are still not certified, accredited, or required in any lawful way (Parsons et al.).

Public policy in the United Kingdom has taken a lead in the area of teaching development strategies in higher education with the establishment of the Higher Education Academy (HEA) in 2004. The HEA is devoted to the enhancement of the quality and impact of teaching and learning in higher education (Parsons et al., 2012). The HEA has worked with other institutions and has developed partnership arrangements which includes the HEFCE-funded Centres for Excellence in Teaching and Learning program in England and North Ireland, the Scottish Quality Enhancement Themes, Wales' Future Directions initiative, and the HEA's own UK-wide discipline-specific support (Parsons et al.). Initial training of university teachers is now established in every university in the United Kingdom, Norway, and Sri Lanka. Training of college instructors is becoming increasingly common in other countries as well (Gibbs & Coffey, 2004).

Indiana University has a rigorous professional development program, the Preparing Future Faculty (PFF) course sequence in the sociology department. The course consists of three-semester in length and focuses on equipping graduate students with the pedagogical tools to instruct undergraduates. Initial lessons help faculty hone their teaching and classroom management skills, while later sessions navigate the professional, personal, and social pressures of the profession (Wurgler et al., 2013).

Slimmer (2012) examined a nursing program implemented in the Teaching Mentorship Program within the College of Nursing. The program was designed to facilitate new faculty member's transition from nursing practitioners to nurse educators (Slimmer). The program was grounded in teaching philosophy surrounding the ideas that the faculty member is a facilitator of learning, a content expert who makes knowledge relevant, and an advocate for learning. The faculty member demonstrates a joy of teaching and discovering new knowledge, and the faculty member is a learner who engages in a partnership with students to share knowledge (Slimmer). New faculty members are partnered with a mentor. Together, faculty member and mentor identify strengths and areas that need growth and development. During the first semester, the faculty member participates in numerous professional development opportunities such as internal workshops, external conferences, or individualized development modules designed by the mentor. These opportunities continue during the second semester, but the mentor and faculty member also review student evaluations to look at evidence-based feedback. They also addressed areas needing further development. At the end of the second semester, the faculty member completes the end-of-year achievement report and sets new enhancement goals for the next academic year. Since implementation of the

program, faculty retention rates have improved, and student satisfaction with the quality of instruction increased, with the mean score on a satisfaction survey as 3.5 (1 = not helpful, and 4 = very helpful) (Slimmer). Undergraduate student satisfaction increased from 5.0 in 2005 (prior to starting the program) to 5.67 in 2009 (1 = not at all satisfied, and 7 = extremely satisfied). In 2009, the nursing program was also ranked number one for overall program satisfaction among the select six programs in the comparison group (Slimmer).

Similarly, the University of North Carolina nursing school implemented a faculty development program in order to help nurse practitioners' transition into the role of nursing educators. The goals of the faculty development program encompassed four major domains: professional, instructional, leadership, and organizational development. The faculty development program included an annual clinical faculty workshop, monthly face-to-face and online educational programs, a formal mentoring program for novice teachers, programs for professional and career development, and a website for faculty orientation and continued learning (Barksdale et al., 2011).

Other schools are putting faculty development programs into place as well. Harvard's Bok Center for Teaching and Learning provides an online eight-week teaching certification for higher education teachers (Grasgreen, 2010); likewise, Massachusetts Institute of Technology (MIT) offers a two-year program, complete with eight workshops. Some topics included formulating teaching philosophies, designing courses, planning lectures, and creating syllabi (Grasgreen). Brown University offers four different certificates for higher education teachers. Each certificate requires one year to complete. Contents revolve around building components of reflective teaching, planning,

engaging different learning styles, establishing learning goals, and using innovative teaching practices (Grasgreen). Ohio State, Minnesota State University, Indiana University and Berkeley also have training programs in place for those interested in teaching in higher education (Grasgreen).

### Similar Studies

What kind of training is needed? To what extent should faculty members need training? The following studies show a pattern the positive impact training can have on student satisfaction, student achievement, and faculty efficacy. Evidence shows that short-term interventions and training, such as an afternoon workshop, have minimal impact on sustained behavior change, but longer, more formalized trainings showed improvement in student satisfaction, student achievement, and faculty efficacy (Gibbs & Coffey, 2004).

Gibbs and Coffey (2004) examined the effectiveness of training programs at 20 universities in eight different countries consisting of at least 60 hours and up to 300 hours of training. Faculty members in the control group did not receive any training. Three different survey instruments were used: two surveys were given to the students to evaluate whether they were using deep or surface approaches to learning, and faculty completed a survey, which measured the extent to which they were teacher-centered or learner centered. Results indicated that the training does make a significant and lasting impact on teaching. The extent to which students used surface approaches to learning decreased after faculty members had been trained, but the amount of the decrease was not statistically significant. The results indicated that faculty who participated in the training became more student- and learner-focused, whereas faculty in the control group actually

became more teacher-centered than when the study first started. These data verify that well-designed, substantial training programs for new faculty are worth the time and the effort (Gibbs & Coffey).

#### Similar Studies Related to Academics

Perez, McShannon, and Haynes (2012) implemented the Gaining Retention and Achievement for Students Program (GRASP) which involved an instructional coach conducting classroom observations once per week for 15 weeks and provided instructors with feedback and coaching on alternative strategies. Participants included 31 faculty members who taught 20 classes that allowed for pre- and post-GRASP comparison data between Fall 2006 and Spring 2008. Academic achievement was measured by percent of students who passed with an A, B, or C, and retention was based on the percent of students who remained enrolled in the college one year later. When comparing students from prior years, student success increased by 7.9% and was statistically significant for male and minority students. Retention rates rose by 4.0%, but the difference was not statistically significant. The findings provided support for professional development in the area of teaching pedagogy.

Menekse et al. (2013) found similar results with an increase in student achievement. The researchers conducted a mixed-methods study to determine to what degree differentiated activities affect student learning outcomes. Similar to Hora's (2015) earlier study, the researchers used the DOLA framework, which classifies learning activities as interactive, constructive, or active. The study consisted of 42 undergraduate engineering students enrolled in an introductory engineering course in a large public university located in the southwestern United States. The researchers believed that similar

to other domains, engineering education lacks a framework to classify active learning methods, which makes it difficult to evaluate if active learning methods are effective for learning. The researchers gathered materials, assessments, and handouts, while observing the course for an entire semester. Researchers chose two units for the focus of the study. Menekse et al. altered course material, provided written guidelines, and used only one type of activity per class period. Students took daily quizzes for each activity at the end of each class. The researchers also classified the type of question and the level of difficulty of the question. Results of the study showed that students scored higher on posttests after participating in the activities classified as interactive and constructive. The student scores on more difficult inference questions suggested that activities classified as interactive activities provided statistically significant deeper learning than activities classified as constructive or active.

Similarly, Linsey et al. (2009) conducted a mixed-methods study to determine if Active Learning Projects (ALPs) had an impact on student learning. The researchers created and evaluated 28 activities at three different higher-education schools: a research institution, an institution with a teaching program, and a community college. Students were in engineering classes taught using a lecture-based format. Researchers used a variety of data including a combination of student opinion surveys, pre- and post-activity quizzes, and a concept inventory. Activities the researchers created, such as hands-on activities, thought experiments, multi-media software, and many other approaches were created for a diverse community of learners.

Linsey et. al (2009) concluded that ALPs were an effective way to bring active learning into an engineering class and the researchers also concluded that ALPs enhanced

the learning experience. The researchers found that ALPs were effective for improving learning. The researchers show that using ALPs increased student learning more than compared to a strictly lecture-based classroom.

Another mixed methods study in New England, which included 50 faculty members from eight higher education institutions, looked at the effectiveness of using inquiry-based learning (IBL). Faculty members were assigned to two groups where one group trained for five days on IBL techniques with topics such as student research, problem-based learning, fostering creativity, departmental strategies, and the scholarship of teaching. Faculty members then taught their classes using strategies learned in the training to examine the affect that IBL had in the classroom. The researcher found that IBL improved the quality of teaching and learning in higher education (Deignan, 2009).

Adedayo (1998) looked specifically at math courses to determine whether class delivery methods had an impact on student achievement with first year students from the National Certificate of Education in Nigeria. A sample of 165 students comprised 71 males and 94 females participated in three different methods of teaching in a basic mathematics course. The three methods were lecture-based format, interactive format with individual use of materials, and interactive method with group use of materials. The researchers believed that using different methods would result in successful learning of math concepts and in turn, reduce the alarming dropout rate in math classes. There were two experimental groups and a control group who were given a pre-test and posttest to assess student knowledge of the skills covered in the course. Results showed that students exposed to interactive learning had the highest mean score of 57.54 on the achievement test compared to the control group mean score of 52.85. A further finding revealed that

males favor interactive teaching methods as individuals, whereas females prefer interactive teaching methods as groups.

Vrioni (2011) also researched varied delivery approaches and conducted a study to examine the effects of a lecture format versus a cooperative learning approach on the academic performance of adult students at the University of Tirana in Albania. The study consisted of 243 third-year students enrolled in a communication skills course. The researchers divided students into two groups, a lecture group and a cooperative learning group. Students completed a final exam as part of the data collection. The final exam had questions written specifically for one group or the other. Sixty-two percent, or 129 students, achieved higher scores in the higher order thinking questions when they learned using a cooperative learning strategy. Twenty-four percent, or 75 students, achieved higher scores on higher ordering thinking test questions when they learned through a lecture format. Fourteen percent, or 39 students, scored equally on both the lecture format and cooperative learning format questions. The researcher found that adding group learning to university classrooms showed an increase in understanding. The students of average ability derived the maximum benefit from learning in a classroom with cooperative learning strategies compared to low-achieving and high-achieving students. There were no significant findings for high achieving students. Vrioni suggested that group learning could contribute to new educational policies, reform, and a better understating of the subject material.

Kurt's (2017) mixed-methods study determined that a blended learning classroom (a classroom that uses many different teaching delivery methods), as opposed to a traditional lecture-based classroom, produced better learning outcomes for students at a

state university in Turkey. Qualitative and quantitative data came from 62 pre-service teachers in two different classroom management courses, one group randomly selected and assigned to the control group and the other to the experimental group. The study spanned a 14-week semester, and the researcher analyzed pretest and posttest data. The researcher taught both experimental and control groups.

The course selected for the current study was a classroom management course for future teachers. The goal of the course was to prepare pre-service teachers to be effective managers of their future classes to maximize learning in the classroom environment. Key topics covered in the class were classroom climate, causes of discipline problems, strategies for dealing with discipline problems, and the development of relationships among students, teachers, and parents. The typical course delivery of the control group was a lecture format. Students read assigned chapters before attending class and followed the lectures during class, then class ended with a teacher-led question and answer session. In the experimental group, the flipped classroom, students and teacher interacted on Edmodo, a social-learning platform for teachers and students to communicate by written discussion, file sharing, interactive quizzes and assignment tasks. Lectures posted as podcasts served as means of delivering course content, followed by a comprehensive quiz. Face-to-face class time began with a brief review of the lecture video content, followed by interactive and practice-based tasks. Examples of tasks were case studies, role-playing, and watching real classroom video footage. Students often worked collaboratively in groups to act out scenarios and present responses.

The researcher found that students in the experimental flipped classroom group had higher gains in self-efficacy beliefs compared to the control lecture-based group,

though not at a statistically significant level. The study also focused on whether there was a statistically significant difference regarding students' exam scores. The findings displayed that students in the flipped classroom outperformed the traditional classroom.

Students in the experimental group participated in an interview process so the researcher could gain an in-depth understanding of perceptions and experiences with the flipped instruction format. Four major categories emerged from the analysis of the data: perceptions of the efficacy of the flipped class model, changes in the classroom environment, benefits of individualizing learning, and applicability of the model to language teaching.

#### Similar Studies on Student Satisfaction

Several studies examined different delivery approaches and different faculty training methods and the impact on student satisfaction and student engagement. In the study presented by Linsey et al. (2009), the researchers not only found an increase in student performance, but also that students were satisfied and desired more active learning practices (ALPs) in their classes. The researchers showed that using ALPs increased student learning more, as compared to a strictly lecture-based classroom. The activities the researchers created represented a wide range of learning styles, personality types, and were designed for a diverse community of learners. The researchers also found that students were positive toward the use of ALPs, and students desired more active learning activities in their classes.

In the study by Kurt (2017) described earlier, the researcher also concluded an increase in student satisfaction. All students in the experimental flipped classroom reported to be highly satisfied with the format because of the enjoyment of class time and

the knowledge gained from learning relevant information. Students also commented on the classroom environment as being student-centered, more positive and less stressful. Students saw a direct application to the real-world classroom in the flipped format.

Dixon and Scott (2003) looked at teacher behavior to see if it had an impact on student satisfaction. Faculty members participated in professional development workshops on how to engage learners and use a variety of teaching methods. Following the study, over two-thirds of the participants changed their teaching behaviors and students showed increased ratings of the teacher in the areas of relevance of teaching, interaction with and movement among students, encouraging students to ask questions, and making eye contact with students.

Vrioni (2011) found that adding group learning to university courses showed an increase in student interest, motivation, creativity, and understanding. The students of average ability derived the maximum benefit from learning in a classroom with cooperative learning strategies. There was no significant difference for high achieving students. The researcher suggested that group learning could contribute to new educational policies, reform, and a better understating of the subject material.

Stes et al. (2010) completed a quantitative study using pre-test and posttest data. The data was assembled using 20 experimental teachers and compared to 20 control teachers. Seventeen teachers in the experimental group and 12 teachers in the control group were also interviewed. The faculty in the experimental group were voluntary participants in an instructional development program. Little is known about the impact that instructional development has on a faculty member's daily teaching practice. The current study investigated the impact of an instructional development program for

beginning university teachers on their teaching approach at the University of Antwerp. The results showed that teachers in the experimental group stimulated discussion among students statistically significantly more at the posttest in comparison to the pre-test. The control group did not show any statistically significant change from pre-test to posttest. This was a relatively small study and all other hypothesis were shown as not having significance. In the study described earlier, Gibbs & Coffey (2004) also found that group interaction of the control group, the group that received no training, had worsened more than the group that received the training.

Hora (2015) used a mixed methods approach by analyzing data from 56 science faculty teaching a total of 95 class periods from three large public research universities in the United States and Canada in the spring of 2013. Through descriptive statistics and social network analysis, Hora sought to answer two research questions: 1. What teaching practices are employed by a group of science and engineering faculty? 2. What is the prevalence and nature of active learning observed in these classrooms? A team of four researchers were trained in using the evaluation tool, the Teaching Dimensions Observation Protocol (TDOP), and researchers watched and coded recorded teaching segments. Results indicated extensive use (64% or 35 faculty) of lecturing with pre-made visuals. Sixty-one percent (34 faculty members) of faculty lectured with no visible student engagement for periods of 20 minutes or less. Twenty-three percent (13 faculty members) lectured for periods of 21-40 minutes, and 16% (9 faculty members) lectured for over 40 minutes. The data revealed lower rates of active learning modalities, such as students answering questions (28% or 15 faculty) or problem solving (15% or 8 faculty), lowered rates of constructive learning modalities, such as students asking questions (4%

or 2 faculty) or doing creative tasks (2% or 1 faculty), and lowered rates of interactive learning modalities, such as students working with peers to do creative tasks (2% or 1 faculty).

### Similar Studies on Faculty Sense of Efficacy

Several studies examined the effects of faculty training on a faculty member's sense of efficacy. Stes et al. (2010) conducted a review of 37 published sources of evidence of the impact of instructional development within higher education. Stes et al. found that the effect on teachers' attitudes and knowledge and skills was the most common outcome with schools that had teacher development programs in place. Out of the 36 sources, 27 (75%) provided evidence of teacher attitudes and knowledge and skills being developed through the program; minimal evidence was provided on teaching concepts.

Postareff et al. (2007) also examined pedagogical training and the effect on approaches to teaching and on self-efficacy beliefs. The mixed-methods study used a control group. The results indicated that trained faculty shifted more towards student-focused learning, rather than teacher-focused learning. In a similar study, Butcher and Stoncel (2012) used a case study approach to explore the nature, extent, and impact of faculty members completing a teaching certification training program. The researchers revealed that teachers in the training program were more willing to adopt new approaches to teaching, planning, and assessment, than those who did not participate in the teacher development training program.

### Similar Studies with No Change Indicated

In some studies, results were not significant and the researchers did not find benefit in pedagogical training. McArthur et al. (2004) observed no differences in subsequent teaching methods between faculty members who completed a postgraduate certificate and those who did not. However, the researchers still concluded that such programs did have some positive effects. Even though results showed no difference of the control and the experiment group, the less experienced faculty were able to glean some new teaching ideas and learning methods throughout the research.

Westhues et al. (2014) conducted a mixed-methods study to examine the effects of using Problem-Based Learning Strategies (PBL) in a university social work program. The study involved 23 incoming social work students across five core courses over the two-year span of the program. Three of the five instructors took a one-week training session on PBL activities and taught using PBL teaching approaches at other universities. The researchers divided students into two groups, either a PBL class or a non-PBL class. The researchers discovered that both groups showed statistically significant gains in their knowledge of social work skills, knowledge, and values, regardless of the group type. Both groups of students also made statistically significant gains in confidence about their ability to practice social work. The researchers found the students in the study were prone to make the gains in knowledge and confidence when they participated from a PBL or a non-PBL approach to teaching. The non-PBL group reported a concurrent statistically significant shift to surface learning, indicating that they adopted a more situational approach to their learning.

Huggins and Stamatel (2015) completed a quantitative study in a 300-level sociology class. The study involved surveying two groups of students: one group of 117 students with a class format of lecturing and one group of 127 students with a class format of team-based learning activities (TBL). The study compared lecturing versus active-learning approaches to determine if either presentation method had an impact on learning outcomes. Students in two different groups of the same Sociology class were assigned the same textbook readings, and were working on the same three class objectives, but the content delivered in the class was different. The study explored which group mastered knowledge better and which group was more satisfied with the lesson delivery. Results showed there was no statistically significant difference between the two groups in the areas of acquiring and comprehending knowledge or when comparing, contrasting, and applying knowledge. Findings did show the TBL students felt they worked harder than students in the lecture classes and TBL students believed they learned more about their professor more than the lecture group.

### Conclusion

Ward (1968) wrote, “The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates” (p. 16). Higher education institutions have a vested interest in effectively integrating faculty development training programs in the area of teaching methodology and pedagogy (Bojarczyk, 2008). Learning what to teach, how to teach, and learning about different delivery methods can be a daunting task for novice educators (Barksdale et al., 2011). Faculty development is essential to prepare novice educators for their role in teaching and to keep experienced faculty members up to date with new educational approaches. Faculty development in the area of teaching theory and

methodology helps faculty members move from practitioners in his or her field, to educators in the field (Barksdale et al.). Faculty development programs provide a venue for educators to learn new knowledge and skills for effective teaching, allow educators to develop a network of trusted colleagues for support, and it helps educators learn about the culture of the school and what is needed to be a successful faculty member (Barksdale et al.). To counter the limitations of lecturing and one-way flow of information, some instructors have incorporated teaching strategies and methods to engage learners to make lectures more engaging and interactive. Such active-learning approaches created multidirectional flows of information and it prioritized student interaction and engagement which enhanced the learning process (Barksdale et al.; Bojarczyk; Boyer, 1990).

Boyer (1990) asserted that teacher training should be incorporated into all graduate programs; seminars on teaching should be a credit bearing course and should be taught collaboratively by a ranking professor in the discipline. Equally important to knowing teaching theories and methodologies are the personal characteristics that influence teaching effectiveness, such as creating a supportive learning environment, developing and fostering positive relationships with students, showing enthusiasm, and maintaining a sense of humor in the classroom (Barksdale et al., 2011).

Disciplinary knowledge, while essential, must be combined with a good foundation of disciplinary knowledge. Students need problem solving skills and critical thinking skills in order to compete in the workforce (Fink, 2013). Lord (2007) stated:

If college students are encouraged to learn only the facts and details and aren't required to comprehend the information, they're left with superficial, nonenduring

knowledge. Understanding, not facts, is what education is all about. It's understanding what's left after you've forgotten all the details. (p. 71)

Students need a developed understanding of the interactions and connections among different kinds of knowledge, an ability to work with others, especially those different from themselves, and perhaps most importantly, they need to know how to continue their own personal, professional, and social learning (Fink, 2013).

Assessment of faculty development programs will be a critical component if schools adopt faculty development training programs for the pedagogy of teaching. Schools need to be able to provide information that can guide teaching and learning, to show current and past performance benchmarks, as well as provide the public with evidence that the money given to the university is a good investment (Halpert & Hakel, 2002).

There is serious work to do in the future, such as establishing teaching certificate programs (Boyer, 1990; Fink, 2013). There is also need for a change of classroom cultures to support the outcomes of schooling that meet the societal needs of the 21st century (Vrioni, 2011). Faculty development programs are effective only to the extent that individual faculty members are willing to make a change and to utilize new teaching techniques in the classroom. If the culture of an institution does not support the faculty taking risks and using innovative teaching practices, then faculty members may not put forth their best efforts for improving instruction (Rosensitto, 1999). To establish this, a change in the preparation of all teachers to understand, internalize, and implement communication principles while interacting with students is necessary (Vrioni).

Research and attention to faculty development, especially in the area of faculty satisfaction and performance has increased in the last decade. There is still little research on the effectiveness of pedagogical faculty development programs because few mandatory programs exist (Huggins & Stamatel, 2015). Further research is also needed in deciding how to adjust to the coming structural shift in higher education prompted by online and different modalities of teaching and learning (Fink, 2013).

### Summary

The purpose of the current study was to explore the relationship between the level of teacher methodology training a faculty member received and the level of student satisfaction, current course performance, student attendance, and faculty sense of efficacy in teaching in order to explore the impact the methodology training had on these areas. Findings in the literature led this author to conclude that this research was needed. The following chapter reviews the quantitative, survey-based methodology used for conducting the current study. The following chapter will explain how that methodology was designed to answer the five questions:

1. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' satisfaction of the faculty member?
2. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' current course performance?
3. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' attendance?

4. To what extent is there a relationship between amount of teaching methodology training and the belief that teaching methodology training is needed?
5. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and faculty sense of efficacy?

## CHAPTER III

### METHODOLOGY

#### Introduction

Chapter Two provided a synopsis of the literature relating to faculty development training and adult learning theories. Chapter II content examined the history of the development of training for higher education faculties, the different types of faculty development, teaching the adult learner, learning styles, faculty willingness and the need and want for faculty development in the area of teaching methodology training, teacher efficacy, and a look at the training programs that some colleges have today. The current study was designed to add to the body of literature related to faculty development and teaching methodology training for higher education faculty members and employed survey research that would provide relevant data for a clearer understanding of the needs of teaching methodology training for high education instructors. The specific research questions in the study were:

1. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' satisfaction of the faculty member?
2. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' current course performance?

3. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' attendance?
4. To what extent is there a relationship between amount of teaching methodology training and the belief that teaching methodology training is needed?
5. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and faculty sense of efficacy?

### Research Design

The research involved a collaborative process between the researcher and faculty members from higher education institutions. The goal of the study was to gather quantitative data from a sample of the entire population of higher education faculty members in the United States. After a thorough review of existing research tools, the researcher used a combination of surveys. Two surveys were distributed, one for the faculty and one for the students. The faculty survey comprised of 25 questions: 12 demographic questions, seven level of training questions, three perceived need questions (multiple items), three efficacy questions (multiple items). The researcher adapted survey tools with permission from Rosensitto (1999) and Woolfolk and Hoy (1990).

The student survey comprised of 17 questions: seven demographic questions, five performance questions, two absence questions, one motivation question (multiple items), and two student satisfaction questions (multiple items). The researcher compiled parts of two different surveys. The researcher adapted survey questions with permission from Pintrich et al. (1991), and Purdue University's Purdue Instructor Course Evaluation Service (PICES) Item Catalog (2011).

## Participants

The population for the current study was university faculty members in the United States from community college, four-year colleges, and career program colleges. Surveys were distributed to 53 individuals, as well as the department deans from nine different institutions. The researcher was not allowed access to distribution lists at each campus, so it is unknown how many faculty members were given access to the survey. The researcher also used snowball sampling. Snowball sampling is undertaken when a qualified participant shares an invitation with other subjects similar to them who fulfill the qualifications defined for the targeted population (Berg, 2006). The faculty members who took the survey were instructed to share the student survey with the students in all sections of the faculty member's classes. Because the researcher did not have class lists from the faculty members, it is unknown how many students were given access to the survey.

The sample for the current study were students and faculty from 13 different institutions. The content areas of faculty members can be seen in Table 1. The type of institutions can be seen in Table 2. The faculty survey link was accessed 192 times. Ninety-one faculty members participated in the survey; however, only 84 surveys were completed. Seven of the surveys were excluded because the surveys were incomplete. Five of the completed surveys only had demographic and level of training questions filled out; however, that information was still helpful for research question one addressing student satisfaction as related to level of training of the faculty member, as well as research questions two and three about student grades and attendance.

Table 1

*Content Area of Faculty Members*

	Frequency	Percent
Math	2	2.2
Communications	4	4.3
Science	2	2.2
Healthcare	26	28.3
Philosophy	3	3.3
Humanities	4	4.3
Law	1	1.1
Accounting	2	2.2
Education	13	14.1
Psychology	6	6.5
Business	6	6.5
Engineering	2	2.2
Technology	4	4.3
Agriculture	2	2.2
Machines/Construction	2	2.2
Many content areas	13	14.1
Total	92	100

Table 2

*Type of Institution of Faculty Members*

	Frequency	Percent
4-year	33	35.9
2-year	35	38
Graduate Program	11	12
Career Program	13	14.1
Total	92	100

Of the faculty members responding, 62 were female, 27 were male, and three had no gender selected. Fifty-two faculty members were full time faculty, and 40 faculty members were part time. The average age of the respondents was 48. The average number of years that the respondents taught at the college level was nine years, with an average of 19 years working in the field in which the respondents taught. Faculty members, on average, taught the course 15 times. Institutional information can be found in the Table 3 and Table 4.

Each faculty member was asked to forward the survey link to students either via email or by showing the link in the classroom. Faculty members were instructed to share the link to the survey with all students from all class sections. Of the 84 submitted faculty surveys, 22 of the faculty members had students who also responded to the survey. Sixty-two faculty members did not have any students who responded to the student survey, but the surveys with no student responses was still helpful for research question four, which looked at the level of training and its relationship to faculty perception on the need for

training, and research question five, the level of training in relation to faculty efficacy. It is unknown if the survey link was sent, or the students chose not to take the survey.

The student survey was accessed 532 times. There were 405 responses, of which 373 were complete. Thirty-two surveys were excluded for being incomplete. Students ranged in age from 17 years old to 63 years old, with the average age of 23. The majority of students were taking the class as a requirement ( $n = 284$ ), rather than an elective ( $n = 89$ ). Course information can be found in Table 3 and Table 4.

Table 3

*Type of Degree Program of Students*

	Frequency	Percent
Career/Certificate	53	14.2
Associates	127	34
Bachelors	168	45
Master's	19	5.1
Doctoral	6	1.6
Total	373	100

Table 4

*Length of Course*

	Frequency	Percent
Traditional Semester	302	81
Shortened Semester/Hybrid	42	11.3
Flipped	6	1.6
Online	21	5.6
No response	2	99.5
Total	373	100

## Data Collection

For the faculty survey, the researcher adapted survey tools with permission from Rosensitto (1999) and Woolfolk and Hoy (1990). For the student survey, the researcher adapted survey questions with permission from Pintrich et al. (1991), and Purdue University's Purdue Instructor Course Evaluation Service (PICES) (2011). The survey officially launched via an online survey tool called Survs on September 19, 2018 and remained open until December 31, 2018. The first screen to the survey was the faculty member or student's consent to participate. The initial invitation to complete the survey was sent on September 19, 2018, but some institutions requested a delay in the launch of the survey due to survey fatigue at the institution. Students and faculty were guaranteed anonymity and confidentiality for their responses. Names or other identifiers of the students were not requested. Faculty members created a unique password for the survey for the purpose of linking the student survey to the faculty survey anonymously. The researcher informed the faculty members that the survey would take less than ten minutes to complete. The students were informed that the student survey would take less than

three minutes to complete. The researcher had a goal of surveying faculty and students in the middle to the end of the semester, and all campuses fit within this range.

### Analytical Methods

The methods used for this research study was a quasi-experiment because the participants were not randomly assigned into groups. The faculty participants were categorized based on how much methodology training each participant had. To analyze the data, Analysis of Covariance (ANCOVA) was used to analyze the influence of different independent variables on the dependent variable, level of training, to see if the two variables were linearly associated. The researcher used ANCOVA because there was a difference between the groups in the amount of training reported by faculty members. ANCOVA removes any effect of covariates, which was important in the study since it was not possible to randomly assign students to classrooms and students have differences in their knowledge, age, motivation, and other covariates (Leedy & Ormrod, 2016). Specific analyses are listed within each research question below.

In using ANCOVA, the researcher controlled the study for potential confounding variables. The researcher compared the student results for age, motivation, and type of course format. In the faculty survey, the researcher compared age, type of institution, level of the course, content area, years in higher education, years in the field, and the number of times teaching the course.

### Research Question One

Research question one: To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' satisfaction of the faculty member? The data to answer this research question were drawn from the

faculty survey instrument, items 13 through 19, level of training questions, and items 16 and 17 from the student survey, student satisfaction questions. To determine the level of training that faculty members had, the researcher assigned an ordinal score to classify the faculty members into categories: 3. educational degree faculty, 2. trained faculty, meaning faculty had the equivalent of a semester long class of teaching methodology coursework, seminars, or workshops, 1. limited or no training, meaning faculty had less than a semester of teaching methodology training.

The student satisfaction survey was based on the Purdue Instructor Course Evaluation Service (PICES) (2011) item catalog. The team at Purdue tested the reliability of the items in the catalog; results were found to be reliable. The researcher chose satisfaction items from the catalog that specifically addressed the research questions of the current study. The specific student satisfaction items were answered with a continuous measurement scale with a five-point forced choice Likert scale.

1 – Strongly Disagree

2 – Disagree

3 – Neutral

4 – Agree

5 – Strongly Agree

The researcher ran a between-subjects ANCOVA predicting student satisfaction and the level of training of a faculty member. The researcher averaged responses for the multiple-item scale. The reliability of these items was assessed using Cronbach's alpha. Since they were sufficiently reliable, they were averaged together to create a Student Satisfaction composite score with anything higher than .7 being reliable.

Item 17 on the student survey was an open-ended qualitative question asking students to write three words to describe their faculty member. The researcher categorized the words into positive and negative attributes and ran a between-subjects ANCOVA to compare student satisfaction to the level of training the faculty member reported. To determine student motivation and its impact on student satisfaction, the researcher used the Motivated Strategies for Learning Questionnaire Manual subscale by Pintrich et al. (1991). The Pintrich study had internal consistency with an alpha score of 0.74.

#### Research Question Two

Research question two: To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' current course performance? The data to answer this research question were drawn from the faculty survey instrument, items 13 through 19, level of training questions, and item 9 on the student survey, student's current grade. The level of training was determined as described in the analysis of research question one. The researcher ran a between-subjects ANCOVA comparing student grades and the level of training of a faculty member. The researcher used covariates of student age, motivation, number of absences, and type of degree in the data analyses.

#### Research Question Three

Research question three: To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' attendance? The data to answer this research question were drawn from the faculty survey instrument, items 13 through 19, level of training questions, and items 13 and 14

on the student survey, student attendance questions. The level of training was determined as described in the analysis of research question one. The researcher ran a between-subjects ANCOVA comparing student attendance and the level of training of a faculty member. The researcher used covariates of student age, motivation, number of absences, and type of degree in the data analyses.

#### Research Question Four

Research question four: To what extent is there a relationship between amount of teaching methodology training and the belief that teaching methodology training is needed? The data to answer this research question were drawn from the faculty survey instrument, items 13 through 19 (level of training questions as the independent variable), and items 20 through 23 (perceived need as the dependent variable). The level of training was determined as described in the analysis of research question one. The specific Likert scale for the faculty belief in the need for training portion of the study was based on Rosensitto's (1999) study using a seven-point, continuous/interval, forced choice selection.

- 1 – Strongly Disagree
- 2 – Overall Disagree
- 3 – Moderately Disagree
- 4 – Neither Agree, Nor Disagree
- 5 – Moderately Agree
- 6 – Overall Agree
- 7 – Strongly Agree

The survey instrument from the Rosensitto (1999) study was designated from a study by Barnes (1984). Barnes determined that “the resulting coefficients obtained from these calculations were sufficiently high to warrant the use of the instruments in the survey: .87 to .89 for reliability and .93 to .94 for internal consistency” (p. 75). Consequently, the portion of the survey instrument was shown to be both reliable and internally consistent.

The researcher ran a between-subjects ANCOVA predicting the relationship between the perceived need for training and the level of training. Recognizing there may be confounding variables of age, full time or part time, type of institution, public or private school, level of the course, content area, number of years in higher education, number of years in the field, and number of times teaching a course, the researcher compared these groups to determine if the variables had an impact.

#### Research Question Five

Research question: To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and faculty sense of efficacy? The data to answer this research question were drawn from the faculty survey instrument, items 13 through 19, level of training questions, and item 24, efficacy questions. The level of training was determined as described in the analysis of research question one. The specific Likert scale for the faculty efficacy section was based on Tschannen-Moran and Hoy’s (2001) study, which was a five-point forced choice continuous/interval scale selection:

- 1 – Nothing
- 2 – Very little
- 3 – Some influence
- 4 – Quite a Bit
- 5 – A Great Deal

Tschannen-Moran and Hoy (2001) conducted a principal-axis factor analysis to test reliability of their survey. The reliability of the scales was 0.94 and 0.90, therefore both subscale scores for both forms can be used to assess efficacy. For the current study, the researcher averaged responses for the multiple-item scale to create Faculty Efficacy composite score. The researcher ran a between-subjects ANCOVA predicting the relationship between the level of training the amount of faculty efficacy. Recognizing there may be confounding variables of age, full time or part time, type of institution, public or private school, level of the course, subject area, number of years in higher education, number of years in the field, and number of times teaching a course, the researcher compared these groups to determine if the variables had an impact.

#### Limitations

The study presented some limitations. First, the sample size and restricted access to whole campus populations was a limitation. Access to the entire population at each campus was restricted to the number of participants to whom the dean or program chair forwarded the survey. Of the 84 completed faculty surveys, only 22 of the faculty had responses from the students in their classes, therefore, the sample size for the student satisfaction, performance, and attendance questions was a small sample.

Another limitation was that participation in the study was voluntary and did not necessarily represent a diverse cross-section of the pool of participants. The researcher did not have personal connections to the respondents; therefore, faculty members had no obligation to complete the survey. Kelley, Clark, Brown, and Sitzia (2003) found that surveys have better completion rate when distributed by someone with a personal connection.

When faculty members are asked to do extra work, it is typically the motivated faculty members who volunteer. Faculty members who tend to do the minimum work would not likely have taken the time to take the survey. Therefore, the survey may have been flooded with faculty who were, by nature, some of the more dedicated faculty members (Kelley et al., 2003).

The last limitation was that grades and attendance were self-reported by the student. The faculty members did not have to verify if the numbers given were accurate. The survey launched to different schools at different times so while one student may have reported their grades and attendance from the midpoint in class, another student from a different school may not have reported grades or attendance during the final week of class. Therefore, this data may have been collected at inequivalent times.

### Summary

The process of collecting and analyzing data for this quantitative study allowed for a deep level of engagement in the data. The researcher gathered data from several different college institutions, as well as faculty and students from different backgrounds. Conducting an ANCOVA test for all research questions allowed the researcher to examine more of the differences among faculty and students to determine if those

differences made a difference in the results. The wealth of data gleaned from the respondents provided the researcher the opportunity to link trends to the current research, as presented in Chapter Two. Chapter IV will highlight the results of the methods described in this chapter and conclusions of the study.

## CHAPTER IV

### FINDINGS AND CONCLUSIONS

#### Introduction

The researcher performed the current study in order to ascertain whether higher education faculty members' level of teaching methodology training had any relationship to student satisfaction, class performance, student attendance, perceived need for methodology development, and faculty efficacy in teaching. As discussed in Chapter II, while there has been little research related to the impact of student satisfaction, attendance and performance related to methodology training for higher education faculty members, there are many pieces of literature on adult learning needs and ways to reach the adult learner (Friedman et al., 2014; Moore et al., 2008). Because of the presence of literature connecting the impact of having a trained teacher, the current research project provided the opportunity to explore methodology training in higher education and add to current research. By analyzing the data that were collected by distributing faculty and student surveys, the relationship between the level of training and other factors were examined. Understanding the data could provide educational institutions the justification to refine their practice of preparing college faculty members with teaching methodology training and development. The following questions guided the research:

1. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' satisfaction of the faculty member?
2. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' current course performance?
3. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' attendance?
4. To what extent is there a relationship between amount of teaching methodology training and the belief that teaching methodology training is needed?
5. To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and faculty sense of efficacy?

## Findings

### Research Question One

Research Question One: To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' satisfaction of the faculty member? First, descriptive measures were used to report the absolute frequency and relative frequency of faculty members in each level of training category. Results are found in Table 5.

Table 5

*Level of Training of Participants*

	<i>n</i>	Percent
Minimal to No Training	21	22.8
Trained (1 semester or more)	43	46.7
Degreed (education degree)	28	30.4
Total	92	100

*Note.* Trained faculty are faculty who had one semester or more of teaching methodology training. Degreed faculty are faculty with a Bachelor's or Master's Degree in education.

To analyze the data, a frequency and one-way analysis of covariance, one-way ANCOVA, was conducted. The researcher wanted to determine if a statistically significant difference existed between faculty with education degrees, faculty who have had one or more semester of teaching methodology training, and faculty with minimal to no training in teaching methodology. The researcher used confounding variables to examine differences on student satisfaction controlling for age, current course performance, number of absences, motivation, type of degree, and the level of training of the faculty member.

As seen in Table 6, student satisfaction on the level of methodology training of the instructor was statistically significant after controlling for current course performance,  $F(1, 344) = 37.74, p < .05$ , and student motivation,  $F(1, 344) = 5.18, p < .05$ . Student satisfaction on the level of training produced no statistical significance when controlled for age,  $F(1, 344) = .29, p > .05$ , number of absences,  $F(1, 344) = .07, p > .05$ , type of degree,  $F(1, 344) = 2.58, p > .05$ , or level of training,  $F(1, 344) = 1.21, p > .05$ .

Table 6

*Student Satisfaction and the Level of Training Results*

Study controlled for:	<i>p</i> -value
Age	.87
Current Course Performance	<.001*
Number of Absences	.79
Motivation	.02
Type of Degree	.11
Level of Training	.3

\* $p < .001$

Adjusted means were used in an ANCOVA test to remove the effect of the covariates. Looking at student satisfaction, the trained group had the largest adjusted mean for students ( $M = 4.12$ ), followed by the degreed group adjusted mean ( $M = 4.07$ ). The group with minimal to no training had the smallest adjusted mean ( $M = 3.88$ ). Results are found in Table 7.

Table 7

*Adjusted Mean for Student Satisfaction by Level of Training*

Level of Training	Mean	Std. Error
Trained	4.12	.06
Degreed	4.07	.06
Minimal to No Training	3.88	.14

## Research Question Two

Research Question Two: To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' current course performance? A one-way ANCOVA was conducted to determine a statistically significant difference between the level of training of an instructor, and the current course performance, controlling for age, number of absences, motivation, type of degree, and level of training. As seen in Table 8, current course performance on the level of faculty training was statistically significant after controlling for number of absences,  $F(1, 352) = 22.46, p < .05$ , motivation,  $F(1, 352) = 24.71, p < .05$ , type of degree,  $F(1, 352) = 4.36, p < .05$ , and the level of training of the faculty members,  $F(1, 352) = 15.76, p < .05$ . There was no statistical significance when controlled for age,  $F(1, 352) = 1.89, p > .05$ .

Table 8

### *Current Course Performance and the Level of Training Results*

Study controlled for:	<i>p</i> -value
Age	.17
Number of Absences	<.001*
Motivation	<.001*
Type of Degree	.04
Level of Training	<.001*

\* $p < .001$

As seen in Table 9, the trained group had the largest adjusted mean ( $M = 4.56$ ), followed by the group with minimal to no training adjusted mean ( $M = 3.12$ ). The group

with the smallest adjusted mean was the degreed group ( $M = 2.82$ ). Adjusted means were used in an ANCOVA test to remove the effect of the covariates.

Table 9

*Adjusted Mean for Current Course Performance by Level of Training*

Level of Training	Mean	Std. Error
Trained	4.56	.22
Minimal to No Training	3.12	.5
Degreed	2.82	.22

Research Question Three

Research Question Three: To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and the students' attendance? A one-way ANCOVA was conducted to determine a statistically significant difference between the level of training of an instructor, and a student's attendance in the class, controlling for age, current course performance, motivation, type of degree, and level of training. As seen in Table 10, student attendance and the level of faculty training was statistically significant after controlling for a student's current course performance,  $F(1, 350) = 20.1, p < .05$ , and level of training,  $F(1, 350) = 3.14, p < .05$ . There was no statistical significance when controlled for age,  $F(1, 350) = .32, p > .05$ , motivation,  $F(1, 350) = .004, p > .05$ , or type of degree,  $F(1, 350) = 3.42, p > .05$ .

Table 10

*Number of Absences and the Level of Training Results*

Study controlled for:	<i>p</i> -value
Age	.57
Current Course Performance	<.001*
Motivation	.95
Type of Degree	.06
Level of Training	.05

\* $p < .001$

Table 11 illustrates the results for adjusted means. The trained group had the largest adjusted mean ( $M = .83$ ), followed by the degreed group ( $M = .6$ ). The group with minimal to no training had the smallest adjusted mean ( $M = .33$ ). Adjusted means were used in an ANCOVA test to remove the effect of the covariates.

Table 11

*Adjusted Mean for Number of Absences by Level of Training*

Level of Training	Mean	Std. Error
Trained	.83	.09
Degreed	.6	.09
Minimal to No Training	.33	.2

## Research Question Four

Research Question Four: To what extent is there a relationship between amount of teaching methodology training and the belief that teaching methodology training is needed? Data were analyzed by summarizing each respondent's scores on all 31 of these

items. The summary score was called the Perceived Need score, which measured individual faculty member's perceptions of the need for teacher training in order to teach at the college level. The maximum score for each survey item was 7 and the minimum was 1; therefore, the range of possible summary scores for Perceived Need was 31 to 217, with a midpoint of 124. Data were analyzed by calculating the mean Perceived Need, standard deviation, range, and interquartile range for all respondents. As depicted in Table 12, a descriptive statistics report showed that there were five missing scores, so the count for this analysis was 87 ( $n = 87$ ). A faculty member's mean Perceived Need score was 183.02, which was well above the midpoint of 124. Only four faculty members (out of 87) had a Perceived Need score below the midpoint of 124. The standard deviation was 38.1. The range of scores was 192, from a minimum of 32 to a maximum of 224.

Table 12

*Descriptive Statistics for Perceived Need*

Statistical Analysis	Value for Perceived Need
<i>n</i> Valid	87
<i>n</i> Missing	5
Mean	183.02
Median	189
Mode	224
Standard Deviation	38.1
Count	87
Range	192
Minimum	32
Maximum	224

A one-way ANCOVA was conducted to determine a statistically significant difference between the level of training of an instructor, and the perceived need for faculty development in the area of teaching methodology, controlling for full or part time, age, gender, public or private school, level of course, subject area, years in higher education, years in the field, and the number of times teaching a course. As Table 13 shows, perceived need on the level of faculty training was not statistically significant after controlling for full or part time,  $F(1, 67) = .41$ ,  $p > .05$ , age,  $F(1, 67) = 2.1$ ,  $p > .05$ , gender,  $F(1, 67) = 2.26$ ,  $p > .05$ , public or private school,  $F(1, 67) = .2$ ,  $p > .05$ , level of course,  $F(1, 67) = 2.83$ ,  $p > .05$ , subject area,  $F(1, 67) = .22$ ,  $p > .05$ , years in higher

education,  $F(1, 67) = 1.8, p > .05$ , years in the field,  $F(1, 67) = .01, p > .05$ , and the number of times teaching a course,  $F(1, 67) = .38, p > .05$ .

Table 13

*Perceived Need and the Level of Training Results*

Study controlled for:	<i>p</i> -value
Full or Part Time	.52
Age	.15
Gender	.14
Public or Private	.66
Level of Course	.10
Subject Area	.64
Years in Higher Education	.19
Years in the Field	.93
Times Taught Course	.54
Level of Training	.15

As seen in Table 14, the degreed group had the largest adjusted mean ( $M = 193.07$ ), followed by the trained group ( $M = 184.72$ ). The group with minimal to no training had the smallest adjusted mean ( $M = 167.34$ ). Adjusted means are used in an ANCOVA test to remove the effect of the covariates.

Table 14

*Adjusted Mean for Perceived Need by Level of Training*

Level of Training	Mean	Std. Error
Degreed	193.07	7.66
Trained	184.72	5.96
Minimal to No Training	167.43	9.71

## Research Question Five

Research Question Five: To what extent is there a relationship between the amount of teaching methodology training a faculty member has had and faculty sense of efficacy? A one-way ANCOVA was conducted to determine a statistically significant difference between the level of training of an instructor, and a faculty's sense of efficacy, controlling for full or part time, age, type of institution, public or private school, level of the course, subject area, years in higher education, years in the field, the number of times teaching a course, and the level of training of a faculty member. As seen in Table 15, faculty efficacy and the level of training was statistically significant when controlled for the level of training,  $F(1, 68) = 3.44, p < .05$ . There was no statistical significance when controlled for full or part time,  $F(1, 68) = 1.45, p > .05$ , age,  $F(1, 68) = .25, p > .05$ , type of program,  $F(1, 68) = .71, p > .05$ , public or private,  $F(1, 68) = .43, p > .05$ , level of the course,  $F(1, 68) = .183, p > .05$ , subject area,  $F(1, 68) = .61, p > .05$ , years in higher education,  $F(1, 68) = .3, p > .05$ , years in the field,  $F(1, 68) = .04, p > .05$ , or the number of times teaching a course,  $F(1, 68) = .44, p > .05$ .

Table 15

*Faculty Efficacy and the Level of Training Results*

Study controlled for:	<i>p</i> -value
Full or Part Time	.23
Age	.62
Type of Institution	.40
Public or Private	.52
Level of Course	.18
Subject Area	.44
Years in Higher Educaiton	.59
Years in the Field	.84
Times Taught Course	.51
Level of Training	.04

As shown in Table 16, the degreed group had the largest adjusted mean ( $M = 4.25$ ), followed by the trained group ( $M = 4.11$ ). The group with the smallest adjusted mean was the group with minimal to no training ( $M = 3.78$ ). Adjusted means are used in an ANCOVA test to remove the effect of the covariates.

Table 16

*Adjusted Mean for Faculty Sense of Efficacy by Level of Training*

Level of Training	Mean	Std. Error
Degreed	4.25	.11
Trained	4.11	.09
Minimal to No Training	3.78	.14

Faculty members also reported the number of semesters it took in order to be confident in teaching skill and lesson delivery. There were 80 faculty members who answered the question, and 12 that were excluded. An analysis of means was conducted. The mean for all faculty, regardless of level of training was 6.38 semesters before a faculty member was confident in his or her teaching ability. The analysis of means, broken down by level of training, is included in Table 17.

Table 17

*Number of Semesters before Confident*

	<i>n</i>	Mean	Standard Deviation
Minimal/No Training	17	3.96	.56
Trained	41	4.09	.46
Degreed	28	4.2	.48

## Conclusions

Research question one examined student satisfaction and its relationship to the level of training of a faculty member using a quantitative, quasi-experimental approach. The results showed a statistically significant difference when using the confounding

variables of a student's current course performance and a student's motivation. For the student satisfaction questions, the score of three was a neutral score indicating students were neither satisfied, nor dissatisfied with an instructor. The adjusted mean scores for each level of training group were all above the neutral score of three, so overall, the group that was studied felt positively about their instructor with only a small difference in means among the groups. The students who were in a trained faculty member's classroom had the highest student satisfaction score, followed by the degreed group. The lowest student satisfaction adjusted mean score came from the group with a faculty member with minimal to no training.

Research question two examined a student's current course performance and its relationship to the level of training of a faculty member. The results showed a statistically significant difference when using the confounding variables of motivation, type of degree, number of absences, and the level of training. Students from the group with a faculty member with an education degree had the highest average grades (A-). Students from the group with minimal to no training had the next highest average grades (B+). Students from the group with trained instructors had the lowest average grades (B); however, there was little variance between the groups and the grades that were earned.

Research question three examined students' attendance and its relationship to the level of training of a faculty member. The results showed a statistically significant difference when controlled for the confounding variables of current grade and level of training. The trained group had the highest average number of absences, followed by the degreed group, proceeded by the group with minimal to no training.

Research question four examined a faculty member's belief in the need for faculty development as related to the level of training of a faculty member. There was no statistical significance found when the researcher compared faculty from the different levels of training. However, when the confounding variable of level of training was removed, the results were statistically significant. Faculty members overwhelmingly believed in the need for faculty development training. The minimum possible score for the Perceived Need questions was 32 and the maximum was 224, making the midpoint 124. On the survey, the midpoint was a neutral standpoint, neither being for nor against needing training. Only 4%, or four faculty members ( $n = 87$ ) scored below this midpoint, meaning only four faculty members felt that training was not necessary. Of these four, three had no prior methodology training and one attended some workshops. The degreed group had an average Perceived Need score of 193, followed by the trained group at 185, and the group with minimal to no training at 167. All groups had an average well above the midpoint or neutral position. Using the means of each group, it appears that the more training a faculty member had, the more the faculty member felt that training was needed.

Research question five examined efficacy and its relation to the amount of training a faculty member received. The only significance found was when the other confounding variable of level of training was removed. The median, or neutral score for the efficacy questions was a score of three, meaning that the faculty member did not lack confidence, but the faculty member was not overly confident either. All groups scored above the median confidence score, with the degreed group as the most confident, the trained group as the next highest, followed by the group with minimal to no training with the lowest levels of confidence. When faculty members were asked the number of

semesters it took before being confident with teaching, the means among the groups ranged from 3.96 to 4.2 semesters, with little variance between them. The degreed group had the highest number of semesters, followed by the trained group, and then the group with minimal to no training.

### Implications and Recommendations

As indicated in Chapter II, the Review of the Literature, research already exists related to student satisfaction, impacts on students' grades, and attendance, but there has been minimal research to determine if a faculty member's level of methodology training had any impact on student satisfaction, grades, or attendance. The survey results suggested, and the research supported, that higher education faculty members have a desire for more formalized training in the area of teaching methodologies (Lowenthal et al., 2012; Rosensitto, 1999). Results reveal that few faculty members received formal teacher methodology training prior to teaching at the college level. Faculty members are prepared as scholars, but are not required to show that he/she is capable of delivering that information to others (Boyer, 1990; Lowenthal et al., 2012; Stevenson et al., 2006). The best teachers know their content, but they also know about the process (Weimer, n.d.). The results of the current study showed that when a teacher is provided with teacher methodology training, there may be an impact on student satisfaction, grades, or attendance. Future studies could incorporate the following ideas to further the current study:

1. The current study could be replicated by having a larger number of universities represented, therefore increasing the sample size and diversity of the faculty population.

2. The current study could be replicated using one pool of an entire university faculty, therefore having an entire body of faculty represented. Having an entire institution participate would have faculty members of all motivation levels and content areas be included in the study.
3. The current study could be replicated by having student grades and attendance as official reports from the school, rather than self-reported by students in different weeks of the class. The final grade in the class, and the total number of absences would help to keep the data consistent among students.
4. The need for faculty development could be studied further by examining each academic discipline and each level of courses to determine if one area has a greater need than another.
5. A new study could be continued to offer a pilot program with modules or coursework for training higher education program faculty members and then compare to a control group that had not received training.
6. A longitudinal study could be conducted to determine if graduate rates or overall satisfaction of a program were improved based upon training faculty members in the area of teaching methodology.

Although results were not statistically significant based on the level of training, faculty members surveyed overall showed overwhelming support for the desire for methodology training. Master and Doctoral degree programs should start to include some formal curricula designed to prepare faculty candidates in the methodology of teaching. If college faculty members have some basic training, experience, and practice with teaching college students, faculty may feel better equipped to deal with the intricacies and unique

circumstances that arise in the day-to-day life of an instructor. Having new college faculty members complete a training program will help to ensure that the next generation of college students are taught by professors who are not only subject area experts, but are also highly prepared teachers with an arsenal of tools to manage teaching at the college level. It is also recommended that higher education institutions require ongoing and formalized training in teaching methodology and other best practices in order to remain in good standing with the university. Having faculty complete formalized training programs will better prepare college faculty members in how to teach and deliver content in relevant, meaningful, and effective ways. College students may have better success and a better learning experience if instructed by faculty members who have basic teacher methodology training; therefore, faculty members would be prepared as both scholars and teachers.

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## Appendix A

### Permission to Modify and Use PICES Survey Items

**From:** Miller, Laura E. <lemiller@purdue.edu>

**Sent:** Monday, October 2, 2017 3:57:44 PM

**To:** Nicole Baker

**Subject:** RE: Course Evaluations

Nicole,

Since we have made the transition to online course evaluations, we have always allowed universities to use questions from the PICES catalogue, as long as attribution was made in any external reports or references.

You have our official blessing to utilize the questions in the catalog for any evaluation purposes on your campus.

Feel free to contact me if you have questions.

Sincerely,

Laura Miller, Operations Administrator

Instructional Data Processing

Room G39 | Stewart Center

P 765-494-5108

**From:** courseval-support-bounces@lists.purdue.edu [mailto:courseval-support-bounces@lists.purdue.edu] **On Behalf Of** Nicole Baker

**Sent:** Monday, October 02, 2017 4:46 PM

**To:** courseval-support@lists.purdue.edu

**Subject:** [Courseval-support] Course Evaluations

Greetings!

I am a student at Olivet Nazarene University. I am working on my dissertation where I will be taking a look at student end of course evaluations. In my search I came across the attached document of items that faculty might want on their end of course surveys.

Do I have your permission to use these item ideas to create my survey?

Thank you,

Nicole Baker

## Appendix B

### Permission to Use Teachers' Sense of Efficacy Scale



**ANITA WOOLFOLK HOY, Ph.D.**

**PROFESSOR**  
PSYCHOLOGICAL STUDIES IN EDUCATION

Dear

You have my permission to use the *Teachers' Sense of Efficacy Scale* in your research. A copy the scoring instructions can be found at:

<http://u.osu.edu/hoy.17/research/instruments/>

Best wishes in your work,

Anita Woolfolk Hoy, Ph.D.  
Professor Emeritus

COLLEGE OF EDUCATION  
29 WEST WOODRUFF AVENUE  
COLUMBUS, OHIO 43210-1177

[WWW.COE.OHIO-STATE.EDU/ANHOY](http://WWW.COE.OHIO-STATE.EDU/ANHOY)

PHONE 614-293-3774  
FAX 614-293-7900  
HOY.17@OSU.EDU

## Appendix C

### Permission to Use Rosensitto Survey

On Jan 18, 2018, at 12:44 AM, Michelle Rosensitto <[mrosensitto@me.com](mailto:mrosensitto@me.com)> wrote:

Yes. Happy to help.  
Michelle

Michelle Rosensitto  
EdD, Organizational Leadership  
[MRosensitto@me.com](mailto:MRosensitto@me.com)  
949-280-2962

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On Jan 17, 2018, at 7:44 PM, Nicole Baker <[nrbaker@olivet.edu](mailto:nrbaker@olivet.edu)> wrote:

Found it! I think this will be extremely helpful in my research! I would like to use a few of your survey questions as well. Do I have your permission to cherry pick certain questions from your research given that I cite it properly in my work?  
Thank you so much!  
Nicole Baker

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**From:** Michelle Rosensitto <[mrosensitto@me.com](mailto:mrosensitto@me.com)>  
**Sent:** Wednesday, January 17, 2018 12:12:05 PM  
**To:** Nicole Baker  
**Subject:** Re: Research

The best thing to do is to look up the dissertation on DAI. I believe you can download the full text and instrument. Pepperdine University also has copies in their library collections.

Michelle  
EdD, Organizational Leadership  
[MRosensitto@me.com](mailto:MRosensitto@me.com)  
949-280-2962

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On Jan 17, 2018, at 10:05 AM, Nicole Baker <[nrbaker@olivet.edu](mailto:nrbaker@olivet.edu)> wrote:

This is great news Dr Rosensitto!

Do you have a copy of your research and survey tool? I only saw your research referenced in another dissertation I was reading.

Thank you for being willing to share!

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On Jan 17, 2018, at 11:00 AM, Michelle Rosensitto <[mrosensitto@me.com](mailto:mrosensitto@me.com)> wrote:

Hi Nicole,

Great to hear from you. I'd be happy to have you use and/or modify the instrument that is published as part of my doctoral dissertation. You may even want to replicate the study in a different setting or with a different population. These are always great dissertation ideas. I'll be happy to sign forms.

Most recently, I conducted research on student success in an online writing center, but have not conducted additional research on college teaching and student satisfaction.

All the best!

Michelle

Michelle Rosensitto  
EdD, Organizational Leadership  
[MRosensitto@me.com](mailto:MRosensitto@me.com)  
949-280-2962  
Sent from my iPhone

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On Jan 16, 2018, at 9:42 PM, Nicole Baker <[nrbaker@olivet.edu](mailto:nrbaker@olivet.edu)> wrote:

Hello Dr. Rosensitto,

I found you on LinkedIn after seeing some of your research in higher education.

I am at the beginning stages of my research and am narrowing down my research project for my dissertation. I would like to study the impact that having a faculty member who was trained in teaching methodologies versus a faculty who has had no training on student satisfaction and faculty sense of efficacy.

Would you be willing to share any related research you have? As well as any survey instruments you have used? If it works for my research, I will be sure to obtain proper permission from you before I use it.

Thank you!

Nicole Baker