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EFFECTS OF INNOVATIVE SCHOOL LEADERSHIP PRACTICES WITH THE GOAL OF PROMOTING
COLLECTIVE TEACHER EFFICACY THROUGH CREATING A COLLABORATIVE WORKING
ENVIRONMENT: A LITERATURE REVIEW

A MASTER'S THESIS
SUBMITTED TO THE FACULTY
OF BETHEL UNIVERSITY

BY

DEENA T. BAYER

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
MASTER OF ARTS

MARCH 2021

BETHEL UNIVERSITY

EFFECTS OF INNOVATIVE SCHOOL LEADERSHIP PRACTICES WITH THE GOAL OF PROMOTING
COLLECTIVE TEACHER EFFICACY THROUGH CREATING A COLLABORATIVE WORKING
ENVIRONMENT: A LITERATURE REVIEW

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MAY 2021

APPROVED

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Acknowledgments

I would like to express my deepest gratitude to the many people who have supported me along this journey. First and foremost, my Creator, who planted this seed in my heart to pursue a wonderful and life-giving career of teaching. Second, I want to acknowledge my amazing husband who continues to believe in me and support my goals and dreams every day. From cheering me on, to daddy-duty, I simply couldn't have done it without him. I'd like to also acknowledge and express my appreciation to my thesis advisor, Dr. John Bergeland, for his invaluable guidance and feedback in all of my revisions of this project. Also, a special thank you to the amazing faculty members of the Bethel University Master's of Teaching program, who inspired me to hone my craft and made evening and Saturday classes so enjoyable. Finally, to my two amazing children, Leighton and Connor, who've given me the most incredible strength to go out and conquer anything I set my mind to. I pray they always know that they can do hard things.

Abstract

The purpose of this literature review on collective teacher efficacy and collaborative working environment strategies completed in schools settings from Pre-K-university level, was to help guide teachers and school leaders to examine their faculty's level of self-efficacy, and to propose actionable steps on how to promote levels of self-efficacy. This literature review addresses teacher self-efficacy at three different levels: school leadership, longevity and job satisfaction, and student achievement. Secondly, it addresses two distinct teacher collaboration methods to consider in their professional development and/or content delivery structure: team teaching and micro-teaching. These two methods are examined and discussed in ways they may have major impacts on teacher self-efficacy and student achievement.

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CHAPTER I: INTRODUCTION

Vince Lombardi declared, “Individual commitment to a group effort—that is what makes a team work, a company work, a society work, a civilization work.” A teacher’s sense of efficacy in their craft is essential to the achievement and success of a school. Under a holistic lens, collective teacher efficacy impacts the overall tone and culture of a school, a district, and an overall community. Unfortunately, the focus of other collaborative methods such as team teaching and micro-teaching models are not always put into practice and have been somewhat neglected in teacher preparation programs. In order to understand teachers’ collective efficacy and the influence it has in the classroom, this thesis explores self-efficacy and unpacks it at three levels: school leadership, longevity and job satisfaction, and student achievement. I also analyze two teacher collaboration methods and explore why school leaders may consider them for implementation. These methods include micro-teaching (a group of teachers analyzing and discussing small-scale lessons that have been recorded) and team teaching (a group of two or more teachings working together to plan, deliver, and evaluate learning activities for a group of learners).

As a first year teacher, I was given the opportunity to co-teach a Social Studies class with 61 students and one seasoned teacher, meaning a tenured teacher with ten or more years of experience. The idea of team-teaching sounded daunting at first. Fresh out of a teacher preparation program, I entered this teaching experience with very little knowledge of how to effectively co-teach a class. Nonetheless, this experience sparked an interest to explore the topic of team teaching and micro-teaching and their respective benefits. A related topic - collective teacher efficacy - intrigued me as well. This felt important to research because I value

the opportunity to collaborate and work as a team, and I truly believe that it's crucial to the success of any organization. In my professional experience, I've found that working as a team has always been on the top of my list of job satisfaction and overall effectiveness as an employee. In my estimation, both topics of collaborative methods and collective teacher efficacy are vital to the field of education because they not only look at the micro level of assessment, grading, and classroom management, but also look at the macro level of highly engaged teachers and leaders within the school, thus, promoting a positive classroom environment where there can be an exceptional impact on learning.

While this topic is important on an organizational level, it's also crucial at the national and international levels. This research translates from the organizational level, to the state level, and even beyond because most schools nationally and internationally are shifting from teachers learning and working in isolation to engaging in more collaborative ways of professional growth (Vernon-Dotson & Floyd, 2012). According to Vernon-Dotson & Floyd, (2012), "Teacher teams are one form of a learning community that can offer a new perspective to professional development by providing opportunities for teachers to interact and collaborate with colleagues, evaluate and reflect on their instructional practices, and expand their existing knowledge" (p. 39). Quality teachers are needed for this tough profession and need to be retained. According to Poulin et al. (2008), "human services professionals are pivotal members of our society. They often work under duress and as a result, stress related health and mental health problems commonly lead to job burnout" (p. 72). Based on the research examined in this thesis, teaching teams and other innovative collaborative methods are vital in promoting teacher well-being, the teaching profession, and increasing student achievement.

Reflecting on my experience as a first-year teacher and writing this thesis literature review have provided me with a depth of knowledge that I will carry forward as a coworker, educator, and member of my school community. I came to the review with these questions: How can school leaders best focus on creating an environment that promotes collective efficacy among teachers in order to impact student learning? What are tangible ways school leaders can implement support, trust, and the time needed to develop collaboration among teachers?

Chapter I lays out the purpose of this project, defines key terms, and introduces the guiding research question for the thesis. Chapter II is a literature review that addresses teacher self-efficacy at three different levels: school leadership, longevity and job satisfaction, and student achievement. Chapter II also addresses two teacher collaboration methods: team teaching and micro-teaching. Chapter III concludes the thesis by analyzing, evaluating, and synthesizing the major conclusions of the research. It also includes implications that serve to support my colleagues, educational leaders, and stakeholders based on the findings. Finally, this chapter addresses the research limitations and suggests areas for future research.

Definitions of Terms

For the purposes of this thesis project, the following terms are defined.

Self-efficacy

Self-efficacy refers to the extent to which a teacher believes they can influence a student's level of academic achievement or behavior. Self-efficacy is examined in this thesis in regard to school leadership and the perceptions of collective teacher efficacy amongst staff (Brouwer, 2018). Self-efficacy is also examined in this thesis in ways leaders may seek to

implement collaborative methods such as team teaching and how they may increase a teacher's self-efficacy level (Krammer et al., 2018).

Transformational Leadership

Transformational leadership is a leadership method that focuses on increasing organizational members' commitment, capacity, and engagement in meeting goals (Ninković et al. 2018). The research in this thesis discusses the importance of leaders being mindful of their own levels of self-efficacy. In order for leaders to thoughtfully lead a school faculty, they must examine the relationship between collective teacher efficacy within their entire faculty before considering which transformational leadership activity to use (Prelli, 2016).

Micro-teaching

Micro-teaching is a method of teaching in which a small portion of a lesson is taught and teaching competencies are monitored under close supervision (*The International Journal of Instruction*, 2010). For example, this method can be used as a way to develop teachers' competencies, especially for new teachers. These teachers are evaluated through smaller increments which may include subject area, planning, teaching process, classroom management, communication, and evaluation.

Collaboration

Collaboration in the context of the classroom occurs when teachers of a learning community work together to increase student learning and achievement. In the research, there are benefits to collaboration through team teaching through the transfer of knowledge between senior faculty and newer, less experienced faculty members (Higgins & Litzenberg, 2015). There's also collaboration amongst teachers with diverse backgrounds, whereas students are

given a model about how to dialogue and problem-solve around difficult issues (Garran et al., 2015).

Statement of Research Question

This thesis pursues the following research question: Based on research on collective teacher efficacy, how can school leaders best focus on creating an environment that promotes self-efficacy among teachers in order to create a collaborative working environment and positively impact student learning?

CHAPTER II: LITERATURE REVIEW

In this chapter, I first discuss teacher self-efficacy and unpack it at three levels: school leadership, longevity and job satisfaction, and student achievement. Next, I discuss teacher collaboration through the implementation of the team teaching model. I conclude this chapter with an examination of the research on micro-teaching as a collaborative method.

Literature Search Procedure

The studies included in this literature review ranged from early childhood education to the university level. My investigation focused solely on collective teacher efficacy and student learning, and analyzed tangible ways to support, increase trust, and collaborate among teachers in order to increase their self-efficacy. The next step was to consider studies that included factors related to teacher self-efficacy, collaboration, and academic improvement conducted in a school setting. I then considered studies with descriptions matching the search parameters used in the research. The following step was to gather literature using a keyword search as the initial starting point. There, I employed a keyword search with synonymous words and terms. Then, I searched subject headings, where standardized words or phrases were categorized, and the results were more relevant to the descriptions needed.

Research for this literature review using relevant disciplinary databases in the Bethel University online catalogue that included: EBSCOhost Academic Search Premier, EBSCO MegaFILE, and ERIC. Primary keywords were used to identify possible sources to include for the literature review such as: teacher self-efficacy, collaboration, job satisfaction, academic achievement, and team teaching. In order for the research to be included in the final product of the literature review, the studies must have included some form of self-efficacy measurement,

provided information on collaboration and job satisfaction (including stress and longevity), and involved student academic achievement. Additionally, all of these factors needed to be considered in an academic setting in order to be included.

Narrowing Process

I first began gathering research via keyword searches for empirical studies on teacher's collective self-efficacy on collaboration, job satisfaction, and student achievement, and also the effects of leadership on self-efficacy. Seventeen of these studies met this criteria. Of the 17 studies, five included effects of school leadership and organization on teacher self-efficacy (Brouwer, 2018; Goddard et al., 2015; Ninković et al., 2018; Prelli, 2016; Wei et al., 2014). Seven other studies included self-efficacy as it related to longevity and job satisfaction (Hajovsky et al., 2020; Karabatak & Alanoglu, 2019; Kasalak & Dagyar, 2020; Ngui & Lay, 2020; Poulin et al., 2008; Somech & Drach-Zahavy, 1999; Vernon-Dotson & Floyd, 2012). I also wanted to focus my search on how teacher's job satisfaction and longevity may increase through mindfulness practices in the classroom (DiCarlo et al., 2020). As a result, five studies included self-efficacy and the effects of student achievement (Engin, 2020; Hunt et al., 2012; Love et al., 2020; Mosoge et al., 2018; Parker, 1994).

As I needed additional information, I expanded my search to include teacher collaboration and team-teaching in order to increase self-efficacy. This led me to add another 10 studies (Donohoo, 2018; Garran et al., 2015; Higgins & Litzenberg, 2015; Krammer et al., 2018; Kunnari et al., 2018; Leibel et al., 2016; Pope-Ruark et al., 2019; Schmulian & Coetzee, 2019; Simons et al., 2019). I wanted to also expand on collaboration and team-teaching by analyzing a

different method called micro-teaching. Fortunately, two significant studies analyzed the effects of micro-teaching on collaboration and teacher self-efficacy (Göçer, 2016; Kilic, 2010).

Article Selection

Seventeen articles in this review related to teacher's collective self-efficacy in relation to job satisfaction, student achievement, and administrative leadership. Five of the 17 studies explicitly discussed school leadership in relationship to teacher self-efficacy. Seven studies focused on longevity and job satisfaction. There was also a study that included meditation practices for teachers' job satisfaction and longevity. Five studies focused on student achievement through higher teacher self-efficacy. Ten articles focused on teacher collaboration through a method called team teaching. Two additional studies analyzed another collaborative method called micro-teaching.

Literature Review Organization

The literature review found here in Chapter II is divided into five sections: 1) School Leadership, 2) Longevity and Job Satisfaction, 3) Student Achievement and Self-Efficacy, 4) Collaboration through Team Teaching, and 5) Collaboration through Micro-Teaching.

School Leadership

This section of the literature review includes five studies relating to self-efficacy in both teachers and principals through leadership practices. The first study analyzes how school leaders feel about their ability to lead their schools and how that may affect collective teacher efficacy perceptions. The second study explores transformational leadership, and how that may impact teacher self-efficacy. The third study measured how a principal's perception may impact staff turnover rates and overall student achievement. The fourth study analyzed different

leadership structures and how they may affect self-efficacy. Another study analyzed the difference of leadership structure between a public school and charter school. The final study analyzed as it relates to school leadership determined which behaviors school leaders may choose to utilize to increase levels of collective teacher efficacy of their entire faculty.

Brouwer (2018) set out to examine principals' beliefs about their ability to lead their schools (perceptions of self-efficacy) and to analyze the relationship between those perceptions and the perceptions of collective teacher efficacy amongst their staff. The research set out to answer the questions, "How do principals feel about their ability to lead their schools?" and "What is the relationship between principals' perceptions of their abilities to lead their schools and collective teacher efficacy perceptions?" (p. 23).

Participants in this study included public elementary school principals and teachers from participating principals' buildings in the states of Illinois, Iowa, Missouri, and Wisconsin. In all, there were 33 principals and 73 teachers; 16 schools had data for both principals and teachers. This quantitative, descriptive-correlational study analyzed the perception of collective teacher efficacy as the dependent variable. The independent variable was the perception of self-efficacy of the principal along with beliefs in the subscale constructs of efficacy for management, efficacy for instructional leadership, and efficacy for moral leadership. Data collection included surveys for perception of principal self-efficacy using the Principal Sense of Efficacy Scale (PSES) and collective teacher efficacy perception using the Collective Teacher Belief Scale (CTBS).

Results of this study highlighted the years of experience of the principal in the building were both significantly and positively correlated with, and the only significant predictor of this research, the overall perceptions of higher collective teacher efficacy. The author concluded

that results from the data indicate “longevity of the principal in the building contributes to teachers’ collective belief that they can positively impact student achievement” (p. 134). An observation to note is that policy decisions to support student achievement should seek to build leadership and longevity with a school’s principal. The author noted high principal turnover; unfortunately, “nearly 50% of principals leaving the building within five years”, and “this statistic would further support the implication for district-level practices that would support retention of principals in their current roles” (p. 139).

Ninković et al. (2018) set out to research the micro level of transformational leadership and how an individualized approach to examining this type of leadership may contribute to greater collective teacher efficacy. They examined the relationship between collective teacher efficacy compared with transformational school leadership, while also expanding the understanding of the various components of transformational school leadership and how it is related to collective teacher efficacy. Ninković et al. (2018) explained that “transformational leadership focuses on increasing organizational members’ commitment, capacity and engagement in meeting goals” (p. 51). The following research questions were formulated: “What are the relationships among transformational school leadership, teacher self-efficacy and collective teacher efficacy?” and “How are different dimensions of the transformational school leadership related to collective teacher efficacy?” (p. 54).

Transformational school leadership data was collected from a questionnaire given to 120 secondary school teachers of whom were 28.3% male and 71.7% female, and whose average age was 42.5 years. The questionnaire was based on four basic components: 1. setting directions (having high expectations of teachers as professionals), 2. developing people

(encourage evaluation of teaching practices), 3. redesigning the organization (leaders encouraging collaborative work among staff), and 4. improving the instructional program (protecting teachers when necessary). These components were measured along with the data collected from the *Perceived Collective Teacher Efficacy Scale*, which measures collective teacher efficacy related to teaching, motivation, controlling students' behavior, meeting students' needs, and creating a safe and positive classroom environment.

Based on the findings from the data, it was clear that the setting directions' component was the most positive predictor of increased collective teacher efficacy. An interesting finding in the research was 'redesigning the organization,' for it received a negative sign and didn't predict a correlation with increased collective teacher efficacy. The researchers suggested further study in this area and "that leadership practices such as strengthening the school culture and engaging parents and the wider community are not necessarily positively related to collective teacher efficacy" (p. 59). Overall, this study concluded "not all components of transformational school leadership are equally relevant for predicting collective teacher efficacy" (p. 60). An increased focus on setting directions, such as developing a shared vision, communicating high expectations, and fostering group goals are key in a school's collective teacher efficacy.

Goddard et al. (2015) conducted a study to measure the impact on principal and teacher's perceptions, beliefs, turnover rates, practices, and student achievement rates using data collected from principals and teachers in rural northern Michigan schools. The control group consisted of principals who received routine professional development, while the treatment group of principals received a Balanced Leadership professional development course which addressed the development of 21 leadership skills related to increasing student

achievement. The study focused on the following research question: “How will this professional development impact the principal’s leadership and the school’s instructional climate, principals’ efficacy beliefs, teacher and principal turnover rates, and student achievement?” (p. 56).

The researchers recruited 126 principals of elementary public schools. The schools included in this study consisted of mainly poor students (47% eligible for free or reduced lunch) and mostly white (more than 90%). Researchers randomly assigned the teachers to either the treatment or control group. They hypothesized that the implementation of the Balanced Leadership program would lead to an increase in principal self-efficacy, improved leadership and instructional climate, reduced turnover, and an overall increase in student achievement. The researchers used a series of statistical analysis to examine the survey data from both principals and teachers; survey questions included factors such as school wide collaboration, principal leadership, school climate, along with data regarding staff turnover and student achievement.

The results showed statistically significant differences between the control and treatment group in principal and teacher turnover rates. There was a reduction of 16% for principals and 5% for teachers. There was also a significant difference between the control and treatment group in the factors of principal efficacy, principal leadership, collaboration among staff, school climate, and norms for differentiated instruction. There were no significant differences between student achievement in the treatment and control groups. One possibility for this result was that “the program did not teach the skills associated with increases in teacher perception of leadership or student achievement; treatment principals made small changes in their practice resulting in minimal impact; principal changes alone are insufficient to produce perceived change in instructional climate and student achievement” (p. 58).

Wei et al. (2014) surveyed 2,273 teachers in Texas in order to explore the organizational differences between charter schools and public schools. They examined whether the differences in organization led to better working conditions, higher engagement in student learning, teacher self-efficacy, and job satisfaction. This study was undertaken, in part, as there has been much debate and little research completed over the effectiveness of charter schools over public schools. The purpose of this study was to provide better understanding and more insight into schools' organizational factors that may underlie teacher turnover and suggest specific areas of focus for leaders to address their attention with such issues like teacher retention and student achievement.

The research subjects included 2,559 teachers from a rural Texas charter school and an adjacent traditional public school district; both resided in an economically poor area. According to the authors, "teachers in Texas open-enrollment charter schools have fewer years of teaching experience and have higher rates of turnover than state averages" (p. 8). Both districts serve a largely Hispanic population (95%), and many have limited English proficiency (40%). Eighty percent of the student population is considered economically disadvantaged. Teachers participating in the survey were overwhelmingly female. The charter school district had a higher proportion of white teachers (38.19% versus 5.84%), a lower proportion of Hispanic teachers (59.07% versus 91.85%), and a higher proportion of teachers with fewer years of experience (4.74 years versus 10.32).

Charter schools reported higher expectations among teachers for student performance (with an effect size of 0.49), a more supportive teaching environment (ES= 0.38), but less frequent collaboration with colleagues (ES= -0.21), and fewer opportunities for quality

professional development ($ES = -0.47$). There were no significant differences in charter school teachers' perceptions from teachers of public schools in areas of needs for support, distributed school leadership, self-efficacy, and job satisfaction. According to these findings, the importance of substantial administrative support and collaborative time with colleagues is necessary in order to improve working conditions in charter schools. These organizational factors may underlie teacher turnover numbers, especially among teachers in charter school districts, and are important in addressing teacher retention and student achievement.

Prelli (2016) conducted a quantitative study to determine which behaviors school leaders can utilize in order to increase levels of collective teacher efficacy of the entire faculty as well as grade-level teams. The research focused on the inverse relationship between transformational leadership and collective teacher efficacy in order to strengthen efficacy of teachers, especially those who supported English Language Learners. This type of research is important because it may provide support for leaders when considering how to best assist teachers' professional learning teams. The theory is that by developing the efficacy of these teams, success for student achievement would follow suit.

The study used a correlational design to identify leadership actions and its influence on collective teacher efficacy at the level of the school and team. The participants included 93 grade-level teams from 15 elementary schools which included 306 teachers from all levels of socioeconomic status. The correlational study used two Likert scales to measure teachers' perceptions of principals' leadership behaviors and collective efficacy. The results were measured by both school and team to measure variances between perceived efficacy of the faculty of the whole and that of the teacher team.

The results from the study revealed a negative correlation (-.281) between transformational leadership and collective teacher efficacy. According to Prelli (2016), this negative correlation suggests that when collective efficacy is perceived to be high, teachers perceive leaders to exhibit transformative behaviors to a lesser degree. Another way of interpreting this relationship would be to say that when the perceptions of efficacy are low, the perception of transformational leadership traits are much higher. (p. 177)

The author discussed the importance of leaders to examine the ratings of collective teacher efficacy among grade-level teams and within their entire faculty before deciding which transformational leadership action to use. Prelli (2016) described four significant categories between perceived leadership behavior and collective teacher efficacy at the grade-level team: “a leadership action to improve culture (-.308), work toward establishing a common vision (-.285), bring the teachers to consensus about goals (-.265), and support of individual teachers (-.257)” (p. 177). This study also stated important leaders’ considerations for threats to efficacy. Most notably, an increase in the amount of English Language Learners can threaten the morale of the faculty if they believe they don’t have enough effective instructional strategies to implement.

Longevity and Job Satisfaction

This section includes seven studies that analyze the effects teacher self-efficacy may have on career longevity and overall job satisfaction. The first study examined the shift in professional development in schools in order to create a more collaborative environment to improve the quality of their craft. The second study explored the phenomenon of extra-role

behavior in schools to examine the relationship between extra-role behavior and three factors: job satisfaction, self-efficacy, and collective efficacy. The third study set out to research the role that stress plays in teachers' self-efficacy and job satisfaction. Another study examined the relationship between teacher self-efficacy and teacher job satisfaction and aimed at identifying the relationship between teacher self-efficacy and job satisfaction by exploring how different countries compared. Additionally, a study was added that investigated the different components of the teacher-student relationship in the classroom and how it relates to teacher self-efficacy beliefs. This is important because this contributes to a more positive teaching environment. Finally, the research explored how mindfulness may play a role in job satisfaction. A study was included that examined teacher trainees who participated in a mindfulness training program as part of their academic training, and how it affected the trainees' controls in mindfulness, life satisfaction, and teaching self-efficacy. Another study related to mindfulness studied student teachers' relationships of emotional intelligence with self-efficacy, subjective well-being on resilience, and practicum stress. Finally, a study was included on whether mindfulness practices would lead to an increase in positive classroom climate and a decrease in teachers' levels of stress.

Vernon-Dotson and Floyd (2012) set out to examine the shift in professional development in schools, and how it is moving away from teachers learning in isolation to more collaborative ways of professional growth, which aims to improve their overall quality of teaching. The authors wanted to study ways to improve leadership of teachers by empowering them by collaboration, teaching teams, and inspiring them to become more competent in their teaching in order to improve student performance. According to the authors, "Teacher teams

are one form of a learning community that can offer a new perspective to professional development by providing opportunities for teachers to interact and collaborate with colleagues, evaluate and reflect on their instructional practices, and expand their existing knowledge” (p. 39).

The researchers drew out two main assumptions of teacher leaders, which served as a guide for their study. The first assumption was in order “to provide innovative and creative strategies while maintaining a personal learning environment, teachers *must* collaborate” and the second assumption was “to adequately prepare students for *their* futures, teachers must learn from one another and grow together” (p. 40). The qualitative study researched three grant-funded leadership team projects in three different states (Pennsylvania, North Carolina, and Virginia) with the goal of utilizing these teacher leadership teams to improve their schools. A total of 44 individuals participated. Data was collected from various sources such as focus groups, individual interviews, participant reflections, team evaluations, and classroom products. Field observations were also conducted, which allowed researchers to enter the classrooms and document the strategies teachers executed. The authors independently examined the data, looked for patterns, and identified common categories, using a process termed microanalysis.

The results showed that when given a greater capacity to lead, led to direct leadership among their teaching teams, and as a result, “were able to contribute to and change the face of professional development within their schools, which ultimately led to an increased feeling of self-efficacy” (p. 44). The authors identified three types of teacher leadership team members they categorized as “investors (exhibited caring attitudes), detractors (held personal agendas and held low expectations of students), and fence sitters (not easily identifiable and know how

to ‘play the game’)” (p. 46). Although the findings did not include any major implications, it illustrated the need to better understand the nuances of teacher leadership and work toward a greater understanding of trust among leaders in order to improve quality of instruction.

Somech and Drach-Zahavy (1999) explored the phenomenon of extra-role behavior in schools to examine the relationship between extra-role behavior and three factors: job satisfaction, self-efficacy, and collective efficacy. Extra-role behavior can be classified as a voluntary role; that is, not a part of a teachers’ formal job duties. It is also multi-dimensional and consists of three levels within the organization: the individual level, the team level, and the organizational level. The purpose of this study was to “examine extra-role behavior in schools, and more specifically, to explore the fundamental components of teachers’ extra-role behavior on the three organizational levels, and to identify that may be related to such behaviors” (p. 650). The researchers hypothesized that the relationships between job satisfaction and extra-role behavior at all three levels (student, team, and organization) would be positive. They also hypothesized that relationships between self-efficacy and extra-role behavior would also be positive. Finally, the researchers hypothesized that there would be no relationship between collective efficacy and extra-role behavior as it pertains to the student, however, that there would be a positive relationship as it pertained to the team and the organization.

The study included 251 teachers (231 women, 20 men) at 13 elementary schools. The researchers utilized a two-stage pretest to gather data, and then conducted semi-structured interviews. During the interview, the teachers were asked to list benefits they perform that in turn benefit the student, team, and/or the organization as a whole. The focus of these questions was to determine how these behaviors related to the teacher’s specific role

expectations and requirements. The third and final questionnaire utilized factor analysis when determining the following subscales: self-efficacy, collective efficacy, and job satisfaction.

The results of the correlational analysis supported the hypothesis that the relationships between job satisfaction and the three levels of organizational extra-role behavior was positive and significant. The hypothesis regarding relationships between self-efficacy and extra-role behavior towards the team and organization were found to be positive and significant as well. However, there was no relationship found between self-efficacy and extra-role behavior with the student. The results of this study also did not support the hypothesis that there would be a positive relationship between self-efficacy and extra-role behavior toward the student. This may indicate that teachers refer to behavior as part of their original job duties. Collective efficacy was found to be only related to extra-role behavior toward the team. According to the authors, teachers with higher collective efficacy, compared with those with lower collective efficacy, engaged more frequently in extra-role behavior towards the team. This finding may suggest that enhancing opportunities for collegial interactions and strengthening collective efficacy can have a positive effect on extra-role behavior towards the team. (p. 657)

Karabatak and Alanoglu (2019) set out to research the role that stress plays in teachers' self-efficacy and job satisfaction. According to the researchers, "teaching is defined as a high stress occupation and teacher stress puts not only teachers' health and effectiveness at risk, but also students' achievements. Therefore, coping with teacher stress is an issue that is worthy of attention" (p. 231). This study aimed their focus on the mediator effect of stress on overall teacher self-efficacy and job satisfaction. The researchers' goal was to contribute to the

literature in this area in order to help schools achieve higher student achievement and faculty satisfaction.

The study was conducted via qualitative research based on a correlational model. They gathered data based on the relationship between job satisfaction, teachers' self-efficacy, and stress variables to address whether or not stress influences the effect of teacher's self-efficacy on job satisfaction. They also formed three hypotheses: "1. Teachers' self-efficacy (innovative behavior and coping behavior) affects job satisfaction positively, 2. Stress affects job satisfaction negatively, and 3. Teachers' self-efficacy (innovative behavior, coping behavior) affects stress negatively" (p. 232). To gather data, the researchers used the "Stress Scale," "Job Satisfaction Scale," and "Teacher Self-Efficacy Scale." These were used in a population consisting of 7,634 teachers working in public schools in Turkey in the 2017-2018 school year. Of that number, using a simple random sampling method, 310 teachers provided feedback on the surveys which were then analyzed.

The researchers used five different models to analyze the relationships between the variables. In the first model, they tested the direct effect of teachers' self-efficacy on job satisfaction. In the second model, they tested the direct effect of stress on job satisfaction. In the third model, they tested the direct effect of teachers' self-efficacy on stress. In the fourth model, they tested self-efficacy on job satisfaction and stress on job satisfaction at the same time. Finally, in the last model, they tested the self-efficacy of teachers using the stress mediator effect on job satisfaction. Findings showed that the self-efficacy component affected teachers' job satisfaction positively (Hypothesis 1) and stress level negatively (Hypothesis 3). It also revealed that teachers' stress level negatively affected job satisfaction (Hypothesis 2). The

researchers suggested teachers' self-efficacy can directly influence job satisfaction and stress in both dimensions, stating that "self-efficacy beliefs are predictive of job satisfaction and stress levels. In addition, stress levels of teachers are also predictive of job satisfaction" (p. 236). In addition to these results, the researchers also found dimensions of self-efficacy (innovative and coping behavior) in describing their job satisfaction decreased when the stress variable was included. In fact, "the stress variable reduces the effect of both dimensions of teacher self-efficacy and job satisfaction. Hence, it has been determined that stress is partially mediated by the effect of teacher self-efficacy on job satisfaction" (p. 237). Further recommendations for research in this area included studies on what specific areas of stress teachers face.

Kasalak and Dagyar (2020) examined the relationship between teacher self-efficacy and teacher job satisfaction. The study aimed to identify the relationship between teacher self-efficacy and job satisfaction, to explore how different countries compared. They used a meta-analysis approach to analyze these two components using the Teaching and Learning International Survey. They obtained a sampling from 426 teachers from 50 different countries from a combination of three separate academic years. The researchers hypothesized that there is a positive relationship between teacher self-efficacy and teacher job satisfaction. They also hypothesized that the positive relationship between teacher self-efficacy and teacher job satisfaction increases over the course of one's career. In addition to those hypotheses, they also predicted that the positive relationship existing between teacher self-efficacy and teacher job satisfaction is stronger in countries with very high/high human development indices (HDI) compared to countries with medium/low HDI.

The findings supported the first hypothesis which examined the positive relationship between teachers' self-efficacy and job satisfaction. The average effect size of teacher self-efficacy on job satisfaction was 0.26-0.29, which demonstrated a statistically important relationship between the two variables. The results from the second hypothesis showed a decrease in the positive relationship between teacher self-efficacy and job satisfaction between 2008 ($r=.36$) and 2018 ($r=.23$). This indicated the opposite results of the researchers' prediction, for there actually was a decrease in job satisfaction over the years of the study. So, that hypothesis had to be rejected. This stands against the idea that over time, if a teacher's level of self-efficacy were higher, their job satisfaction would also grow at the same rate. The results from the third hypothesis showed that there was no relationship between teacher self-efficacy and job satisfaction as compared to countries with medium, high, and very high HDI. The researchers assumed that "in societies with individualist cultural structures, although communication between individuals is less, more importance is given to freedom, independence and individual effort of individuals, which encourage individuals to be open to innovations and to improve themselves" (p. 28). Given the results of this study, there still needs to be continued research on teachers from different countries by applying different variables.

Hajovsky et al. (2020) investigated the different components of the teacher-student relationship in the classroom and how it relates to teacher self-efficacy beliefs. The researchers set out to examine how teacher self-efficacy beliefs predict the ratings of conflict and closeness the students have to their teachers. In this study, the researchers examined 885 students from second to sixth grade and analyzed trends of teacher-student closeness and conflict using several models. The data was examined using factors the researchers controlled, such as

student demographics and teacher-student racial and gender alignment in order to examine the teachers' self-efficacy beliefs and how they influence the relationship.

The aim of this study was to help educators and improve their relationships with their students by modeling teacher self-efficacy beliefs as a predictor of teacher ratings of closeness and conflict at each grade. They did this through controlling the variables such as demographics and teacher-student gender and racial alignment. The researchers set out to answer the following research questions:

What are the developmental trajectories of teacher-student closeness and conflict ratings from second to sixth grade? To what extent and in what direction do the functions of developmental trajectories correlate? To what extent and in what direction do TSE beliefs influence ratings of closeness and conflict from third to sixth grade after controlling for student demographics and teacher-student racial and gender alignment?" (p. 145)

Participants of this study included 1,364 students who were recruited using a random sampling plan in order to ensure diversity. The results show that from second through sixth grade, the teacher's self-efficacy remained quite stable over time. The longitudinal findings teachers who exhibit a strong sense of self-efficacy, classroom management skills, and provide a positive classroom environment, positively impact student learning by increasing closeness and decreasing conflict.

Poulin et al. (2008) studied teacher trainees who participated in a Mindfulness-Based Wellness Education (MBWE) program as part of their academic training. The researchers focused on how this program affected the trainees' controls in mindfulness, life satisfaction, and

teaching self-efficacy. The authors stressed the importance of mindfulness in an occupation such as teaching by explaining that “human services professionals are pivotal members of our society. They often work under duress and as a result, stress related health and mental health problems commonly lead to job burnout” (p. 72).

Participants in this study included students enrolled in a Bachelor in Education program who chose to participate in an elective course focused on stress and burnout. There were a total of 28 intervention participants and 16 control participants (70% and 78% female, respectively). Participants in the MBWE program were considered the control group. The researchers hypothesized these students would experience increased feelings of mindfulness and teaching self-efficacy, while also rating their physical health more positively than the control participants. All intervention participants completed questionnaires before and after the courses ended. The researchers also interviewed five students from the program eight months after they had completed the mindfulness training which was during their first year of teaching in order to see whether or not they had applied what they learned.

Overall, there was a significant difference when measuring the intervention and control groups, such as increased mindfulness, life satisfaction, and teacher self-efficacy. However, the influence of the intervention was not consistent across all four of the KIMS (Kentucky Inventory of Mindfulness Scale) subscales and the three TSES (Teachers Sense of Efficacy Scale) subscales. The MBWE program did not have the influence the researchers had hypothesized on psychological distress. Along with collected data, the researchers transcribed interviews with five of the MBWE participants and categorized the responses into themes. One of the major themes included immediate benefits they felt they received from the course. One student

remarked, “I always felt relaxed when I went to class, and I left feeling good and energized, ready to take on the world” (p. 76). Participants also shared many ways in which they applied what they learned in both their professional and personal lives. According to the researchers, “the majority talked about being able to ‘slow down’ and ‘stay in the moment,’ both in their personal and professional lives, and to respond to situations mindfully” (p. 77). Overall, this study brought insight into how professionals in teaching can become more aware in addressing their needs through additional training in self-care. When teachers are better equipped to practice self-care, it allows a better learning environment to better serve their students and themselves.

Ngui and Lay (2020) studied student teachers’ relationships of emotional intelligence with self-efficacy, subjective well-being on resilience and practicum stress. They sampled 200 student teachers from teacher education institutions in Malaysia. The respondents were mostly female (70.5%) and 95.6% were 25 years old. The researchers performed a quantitative study with the use of four questionnaires: The Teacher Sense of Efficacy Scale (TSES), The Trait Emotional Intelligence Questionnaire (TEIQue), The Satisfaction with Life Scale (SWLS), and the 10-item Perceived Stress Scale (PSS-10). The data from these questionnaires were analyzed in order to determine the direct and indirect relationships between the research variables.

The results discussed how self-efficacy can be a mediator between emotional intelligence and resilience. The findings showed a significant relationship between emotional intelligence and self-efficacy ($T= 5.330$), self-efficacy and resilience ($T= 2.867$), and emotional intelligence and resilience ($T=3.994$). This indicates teachers’ self-efficacy has an important impact on their level of emotional intelligence and resilience. Another finding showed the effect

of subjective well-being on the emotional intelligence and resilience relationship. The relationship between emotional intelligence with subjective well-being wasn't significant ($T=0.769$), however, the relationship between subjective well-being and resilience ($T=3.236$), and emotional intelligence with resilience ($T=2.935$) were significant. This indicates subjective well-being may not be the most important emotion in identifying when studying teacher stress. According to the authors, "it is shown that emotional intelligence has an insignificant relationship with subjective well-being. The ability to control and manage emotions is not certain to make one satisfied with his life" (p. 286).

The results also showed how subjective well-being is most predicted by self-efficacy and emotional intelligence, however, it mainly showed self-efficacy dominating the prediction of subjective well-being with a 45% accuracy. According to Ngui and Lay (2020), "when a person feels confident of his capability to perform his roles and duties in the classroom, this pushes the person towards self-satisfaction" (p. 286). Subjective well-being as a strong mediator was also significant in the relationship between self-efficacy and resilience, implying that "when a person is satisfied with his life, this can further reinforce his belief in his self-capabilities and, thus, becoming more resilient" (p. 286). Essentially, a teacher's sense of self-efficacy is important in order to increase resilience through subjective well-being. When teachers are happy and have a strong sense of self-efficacy, they have the ability to become more resilient in the ever-changing world of education.

DiCarlo et al. (2020) studied whether mindfulness practices would lead to an increase in positive classroom climate and a decrease in teachers' levels of stress. The researchers asked two questions: 1. Do mindfulness practices impact classroom climate? 2. Can implementing

mindfulness practices decrease teachers' stress? The independent variable in the study was the mindfulness practices implemented by teachers in early childhood education. The dependent variables were perceived teacher stress measure by the Perceived Stress Scale (PSS) and classroom observations based on the Classroom Assessment Scoring System (CLASS). The implemented mindfulness practices included yoga poses, intentional breathing, and guided meditation. These practices took place within the school day during teachers' arrival, mid-morning, lunch, mid-afternoon, and after the workday in the evening.

The participants in this study were three early childhood education teachers and were all female with 7-15 years of experience. Positive and negative behaviors were scored using video recordings of 10-minute observations. In order to gather the baseline data, researchers told the teachers to behave as they would any other day. Subjects were then given a protocol of mindfulness practices and a checklist to ensure proper participation in the implementation.

The first participant for the first research question scored a baseline positive climate average of 54%, and when the mindfulness intervention was applied, scored a 75%. This represented a 21% increase in positive classroom climate, indicating the mindfulness intervention had been successful. Additionally, the first participant's baseline negative climate average was 20%. When the mindfulness intervention was applied, the negative climate average was 9%; this indicated an 11-point decrease in negative classroom climate. The second and third participant also had similar results.

According to the authors, their study aimed to create "a feasible mindfulness intervention due to its time and cost-effective nature. Teachers can easily incorporate the Mindfulness Practices Intervention in their daily routines with or without their children" (p.

493). The results also showed that the first participant for the second research question scored a 32 on her Perceived Stress Score. After mindfulness practices were implemented, her score was a 30. This represented a two-point difference; both numbers were in the high stress bracket. According to the authors, “more longitudinal implementation of the Mindfulness Practices Intervention may be needed to assess whether the participants would experience declines significant enough to reduce perceived stress from the high stress range to the moderate or low stress range” (p. 493).

Self-Efficacy and Student Achievement

Parker (1994) conducted research on elementary school teacher’s self-efficacy and collective efficacy in order to examine the relationship between these two independent constructs and how they affect student performance. The author also set out to examine how the socioeconomic composition of a student body relates to teachers’ collective teacher efficacy. This research is important to student achievement because as the author stated, “when teachers believe they have able students, they are likely to work more effectively. This, in turn, will help to produce both able and confident teachers” (p. 44). This is also a collective effort among teachers in the whole education system. As Parker (1994) noted, “teaching is not a solitary endeavor. Although much of what teachers do, they do in the absence of their colleagues, education is a collective process” (p. 45). Teachers also rely on students’ previous teachers to set them up with the knowledge and skill set for the students to be successful in the next grade. This is why collective teacher efficacy and a shared mission is crucial to students’ overall success.

In this study, Parker (1994) analyzed the individual teachers and the school as a collective unit. All elementary teachers in a metropolitan school district completed questionnaires; 239 teachers within 19 schools were used in the final sample. Teachers' self-efficacy and collective efficacy was measured using microanalytic methodology, which is where the individuals rated their confidence in performing a difficult task in a specific domain. In this study, the author focused on teachers' efficacy in mathematics, language, and reading. Standardized achievement tests were used as the common measure of student learning across all the schools. Teachers were asked to rate their self-efficacy in these three domains, as well as the school as a whole.

Overall, teachers' mathematics self-efficacy was more distinct from the collective teacher efficacy. The author stated, "it is possible that teachers believe that skills matter more in a relatively concrete and 'culture free' domain such as mathematics" (p. 55). There was also a strong relationship between a school's socioeconomic composition and the students' achievement levels. According to the author, these findings may provide evidence that the effects of familial and student characteristics on level of school achievement might be partly mediated by their substantial impact on teachers' and principals' beliefs in their school's instructional efficacy. Specifically, the higher the percentage of students with disadvantaged backgrounds, the more pessimistic (i.e., the less efficacious) were the principals and teachers about their schools' capability to achieve academic progress. (p. 55)

On the other hand, there are ways to enhance a school's sense of efficacy in order to improve education for socioeconomically disadvantaged students such as restructuring the

school in a way that improves their collective goal. Parker stated that in order to improve academic achievement through collective efficacy, there needs to be further research on collective-enhancing interventions.

Mosoge et al. (2018) investigated the state of collective teacher efficacy in low-performing schools, with an overall aim to establish the importance of collective teacher efficacy (CT toward improved learner academic performance in schools). The researchers set out to examine why low-performing schools haven't attempted to consider enhancing their own collective teacher efficacy despite the abundance of research that points toward teacher efficacy as crucial in improving student performance.

This quantitative study collected data using a survey questionnaire using the short version of the validated Collective Teacher Scale as the survey instrument. The participants were 49.3% female and 50.7% male, and the age distribution with the majority of subjects (52.56%) was 40-49 years, followed by those who were 30-39 years (24.18%). The majority of the participants had 11-20 years of teaching experience. The results from this study revealed that there were a high number of responses to a high level of CTE for general teacher competence and a low level of CTE for task analysis. These results indicate that apparently these teachers from low performing schools, who participated in the questionnaire, believe highly in their level of competence to produce desired results in their classrooms; however, there is a low level of belief in ability to produce results when there are events and other factors outside of their control.

Mosoge et al. (2018) discussed how "teachers' beliefs in their general competence to produce the desired results, is somewhat surprising because of their differing qualifications" (p.

6). These results were interesting in that the whole premise of this study was to further research how low CTE in low-performing schools was the main issue. Mosoge et al. (2018) suggested that “it seems as though the low performance of the school must be sought elsewhere and not in their competence” (p. 6).

Hunt et al. (2012) investigated the perceptions and beliefs of teachers at a Midwestern suburban school about students, student learning, and teacher’s beliefs of their collective abilities to achieve the task of improvement of student learning. The research set out to examine faculty beliefs about student learning, faculty perceptions of their students, and faculty’s beliefs about the ability of the school to affect student academic improvement.

The participants in the study included ten middle school teaching faculty; the teachers varied in experience from fewer than three years to more than 10 years. The method of research was an investigation of beliefs of the faculty about their students, student learning, and their overall collective beliefs of achieving school improvement. Participants were interviewed face-to-face at a time and place of their choosing. The participants were asked a series of 10 open-ended questions during the approximately one-hour interview. In addition, teachers were observed in their classroom twice; each observation lasted approximately 45 minutes. Next, the researchers conducted follow-up interviews as well as collected relevant documents (e.g., lesson plans, activity outlines, and course syllabi).

According to the data, Hunt et al. (2012) found that participants lacked insight to their own personal responsibility to achieve higher student learning. Rarely did a participant indicate or mention the need to improve instruction, in fact, “only one participant, Darla, said anything about improving her own teaching practice” (p. 80). Most teachers indicated that the biggest

obstacle to improvement in student learning was student lack of motivation and support they received from home. Many participants believed that if the students came from more affluent backgrounds, they'd likely perform better at school. According to the authors, the teachers were "not accurately informed about the students or their parents," and because of this lack of understanding, "participants made inaccurate assumptions about their students and based many expressed beliefs about them on those assumptions" (p. 83). In the interviews, all teachers expressed the importance of motivating their students as important for them to learn and participate; however, there were no results from the observations that showed teachers attempting to motivate disinterested students. Overall, instead of focusing on blaming the student for lack of motivation and parental involvement, the focus should be shifted toward teachers' perceptions and attitudes about how effective their role in the classroom changes as they improve their own skills in the classroom.

Engin (2020) aimed to study how students' academic performance and motivation can be affected by parental attitudes, teacher motivation, teacher self-efficacy, and leadership in the school. The descriptive research model examined data from 60 primary school teachers in fourth grade classrooms during the 2017-18 academic year. There were a total of 1,476 fourth-grade students in this study. The six data collection tools included the following: Academic Motivation Scale for First Stage of Primary Education, Teacher Self-Efficacy Belief Scale, Parental Attitude Scale, Primary School Motivation Scale, School Organizations Distributed Leadership Scale, and Personal Information Form. In order to analyze the data, the researcher used One-Way ANOVA to see whether a dependent variable changed according to a categorical variable.

The first research question was, “Do students’ achievement levels differentiate with respect to their mothers’ and fathers’ educational levels and parental attitude factors?” The results revealed a significant difference between a mother’s educational level and a father’s educational level (1,650 as compared to 4,130, respectively). The father’s educational level positively affected a student’s academic achievement much more than a mother’s educational level. The second research question asked, “Does teachers’ motivation differentiate with respect to their length of service, self-efficacy, leadership approach, and type of school they graduated from?” According to data, there was a significant difference between the motivation level of teachers with high self-efficacy (15,8077) and teachers with medium level of self-efficacy (13,5053). This correlates teachers who have high levels of self-efficacy to those who also have higher levels of motivation. According to the author, “teachers with a high level of motivation can plan, implement and pursue their educational duties more consistently which brings out higher academic achievement as an expected outcome” (p. 271). Another outcome revealed lower teacher motivation and self-efficacy in teachers with the least amount of experience. That is, teachers who had 0-5 years of experience were less motivated than teachers with 6-10, 11-15, and 16+ years of experience. According to the author, this outcome could be attributed to lack of experience, and possibly a different leadership approach as opposed to their college experiences, whereas every individual takes on responsibilities in all kinds of duties.

Love et al. (2020) set out to examine the relationship between teacher self-efficacy and student achievement outcomes, specifically teachers who had students with Autism Spectrum Disorder. They explored the dynamics of teacher engagement, stress, and individualized

education program (IEP) outcomes. A total of 44 Special Education teachers were selected in this study. The researchers set out to see whether the study showed a higher level of self-efficacy among teachers, and would that contribute to positive student outcomes. They also wanted to study whether this higher level of self-efficacy would also be negatively correlated to teacher stress.

The researcher measured the participant using ASSET, a 30-item self-report measure of their beliefs about their ability to implement certain teaching strategies when working with their students. Teachers also rated their self-efficacy on how they handle their duties and strategies with a particular student using a scale from 0 (cannot do it at all) to 100 (highly certain can do it). The researchers also gathered data using the Teacher Engagement Rating Scale (TERS) and the student IEP goal, which was measured based on the Psychometrically Equivalence Tested Goal Attainment Scaling (PET-GAS). The study lasted one school year; data was analyzed at the end of the year in May using cross-sectional correlation analysis.

As predicted, teacher self-efficacy was positively related to teacher engagement ($r = .36$, $p = .008$), and student IEP goal achievement scores ($r = .39$, $p = .005$). This illustrates that “teachers who report higher levels of teacher self-efficacy were more likely to engage positively with their students with ASD and to have students with greater goal attainment” (p. 51). Also, teacher self-efficacy was negatively correlated to stress ($r = -.39$, $p = .005$), which indicates teachers with lower sense of self-efficacy are likely to report higher levels of stress. Some non-hypothesized outcomes of this study also showed how teacher stress was negatively related to teacher engagement ($r = .29$, $p = .005$) and student IEP goal achievement outcome scores ($r = .38$, $p = .005$); overall, teachers with higher levels of stress had lower engagement

and student achievement. The results of this study are important to the field of education because, according to Love et al. (2020),

teacher's self beliefs are likely to have a significant impact on teacher's decisions, teaching environment, and interactions with students with ASD. That a relationship between these variables was identified strengthens the importance of teacher belief as an area research and of intervention and informs future experimental and intervention research aimed at addressing areas where teachers feel incompetent. (p. 53)

Collaboration through Team-Teaching

Donohoo (2018) set out to research collective teacher efficacy (CTE) in order to gain a deeper level of understanding of productive patterns of behavior and other consequences that result when a school has a high level of shared sense of efficacy among their colleagues versus individual levels of self-efficacy. The author began the research by explaining the strong link between high levels of perceived CTE and greater student achievement and how it's been found to be stronger than a student's socioeconomic status. Donohoo (2018) explained that CTE has also been associated with many other positive outcomes such as "greater job satisfaction, commitment to students and the teaching profession, and positive attitudes toward teaching students with special education needs and professional development" (p. 323). The research was reviewed in order to examine the productive behaviors that result from CTE and also any other consequences that could result.

Donohoo (2018) conducted an examination of 34 articles that met the following CTE criteria

(a) reported results in relation to teaching behaviors related to collective teacher efficacy; (b) reported findings in relation to other consequences that educators and/or students experienced related to collective teacher efficacy; and (c) included participants who were practicing teachers in primary, elementary, middle, and/or high school settings. (p. 329)

The findings of this examination of research included the association of CTE with positive behaviors such as high expectations set by teachers, greater risk taking by teachers, receptiveness to new and innovative ideas, and also a greater sense of efficacy toward parents. Included in this research study were details of the significant studies and the characteristics of each component listed outlined. This data was analyzed through detailed screening and sorting of the research and then organized and represented in a table. Donohoo (2018) found some resulting consequences of higher CTE whereas

beginning teachers were also less likely to leave teaching when employed with schools where educators shared the perception that together they could overcome challenges and meet students' needs. In addition to the positive behaviors, CTE was also associated with other positive factors including greater job satisfaction, less stress and burnout. (p. 329)

The data also showed where a high level of CTE is present, "teachers set high expectations and had a strong focus on academic pursuits, which in turn influenced the way they approached their work" (p. 329). As a beginning teacher, it's important to consider CTE in a school, and the focus on high expectations not only for students academically, but for the

teachers. In order to have a long-term, satisfying teaching career, the importance the district places on CTE and ways they are utilizing these approaches must be taken into account.

In this study on team teaching, Liebel et al. (2016) examined a three-year-long team teaching model that consisted of three different roles of the teacher in an undergraduate classroom. The three different roles were Teacher Assistant (TA), Lecturer, and Examiner. Essentially, the TA was introduced the first year as only supporting project supervision, and then in the second year, advanced to the role of Lecturer, which allowed them more classroom responsibilities. The stable role of teacher in this three-year study was the Examiner, who took on the overall responsibility of tasks and classroom. In this study, the authors presented the following research questions: 1. How can team teaching facilitate continuity and teacher introduction? 2. What does team teaching imply for course improvement? and 3. What does the involvement of TA's in team teaching imply for the costs of teaching? The authors stated that the benefits of the team teaching model included allowing students to receive more than one explanation of a concept, for it can promote the teacher's development mutually among colleagues, and it can produce more productive lesson planning. However, one of the drawbacks to implementing this approach is that it can come with a high financial cost. The authors set out to investigate how team teaching can be done without additional costs when one teacher can shift into a more developed role.

The researcher used qualitative and quantitative data to measure the undergraduate computer science course. The three roles of TA, Lecturer, and Examiner were applied for three years and the data received from student evaluation surveys were examined. Survey questions that included themes such as lecture content, lecture style, projects, and tooling aspects. The

survey was based on their rate of agreement to statements along a five-point Likert scale. One statement was, “I remember more after a team teaching lecture than in traditional lectures, I have to think more in lectures with team teaching than in traditional lectures, and I was more active during the lectures than in the traditional lectures” (p. 67).

Over 65% of students participating in all three years agreed that they remember more after a lecture that was team taught versus a traditional lecture, which left only nine percent in the first year who disagreed. These results showed how students comprehend the content much better using the team teaching approach. There was very high agreement in the three years (70%, 58%, and 68%) with the statement that team teaching lets students influence the course content to a higher degree. This meant students were possibly more highly engaged. In terms of the costs of team teaching, the authors argued that since the TAs involved were being paid at their graduate level. They basically received “on-the-job training”, which in turn did not increase the costs, while the number of instructors per student increased. Another positive finding of this approach was that the role of TAs offered insights to student learning that the Lecturer and Examiner may have skipped. According to the authors in the TA role, it is

often rather easy to assess when the audience has difficulties to follow or to understand a concept. Furthermore, novice TA’s might have exactly the same questions as the student audience and, by asking these questions, encourage the audience to ask further questions or join the discussion. (p. 72)

Pope-Ruark et al. (2019) explored ways to innovate a four-course, undergraduate semester at Elon University by creating a Team-Teaching family, which consisted of four faculty members who all co-taught a radically different curricular program and shared their

professional team-teaching experiences along the way. Their ultimate goal was to “make visible the lived experience of our teaching team and expand the conversation about co-teaching and faculty narratives” (p. 122). The importance of this research on team-teaching can provide schools with small, intensive learning communities to enable students to learn from multiple teaching styles, resources, and support. The researchers noted team-teaching as “an opportunity to ‘see your teaching from another perspective’ and ‘the opportunity for a sustained and intensive kind of professional development’” (p. 122).

The logistics of how this team-teaching “family” worked together included a well thought out, heavily-planned curriculum, along with a strong personal and professional foundation in order to organize and execute it well. The program lasted a full semester long and included 14 students from disciplines across the university. The data was collected through ongoing reflection and student interviews, and ultimately examined their experiences in order to offer their advice and suggestions for educators who may be interested in an immersive teaching environment. The four faculty members co-taught and co-led fourteen juniors and seniors in four classes, which were block-registered as one unified classroom experience. They were able to deliver instruction through recognizing each individual’s professional strengths and skill sets. Rebecca (Mean Mom) was the organizer and writer, who pushed the logistics through, Phillip (Cool Dad) was a graphic and industrial designer who had more of a laid-back leadership style, William (Visiting Cousin) was a media scholar, who pushed big ideas through, and Joel (Fun Uncle) was a computing sciences faculty member who was the tech guru and did much of the budgeting and logistics. This team-teaching family was able to gain insights on their different students through different relationships based on the student's varying professional,

personal, and disciplinary interests. The researchers stated they were “able to leverage these relationships by working with students in various ways, trading roles when a student needed a new opinion or disciplinary resource, an honest reality check, or a specific strategy from one of our areas of expertise” (p. 128).

Overall, the student’s feedback returned positive based on the four interviews per semester they conducted with students. As the researchers stated, “overall, the students were less aware of our specific team-teaching efforts, but did see us primarily as a unified team who cared about them and the program” (p. 131). They seemed to be less aware of the specifics of what the team-teaching efforts were, and more that the four faculty members appeared to be a unified team who cared very much about the program and their student’s success. There were many takeaways the researchers gave when they examined their experience of their team relationship. Their first suggestion was to simply invite their peers to coffee and just informally talk, share stories and insights, and get to know each other. They mentioned these “informal, collegial conversations outside of meetings and responsibilities can lead to an important network that can be tapped for co-teaching” (p. 132). Another takeaway from this research was the importance in modeling collaboration to students in order for them to be successful in their learning and ability to model collaboration in the future. In order to model collaboration, the faculty members must “be present, attentive, and engaged when a peer is leading a discussion or activity, ask questions, and follow up on points without overstepping. Be role models for professionalism but don’t hide camaraderie” (p. 133).

Krammer et al. (2018) set out to research the effectiveness of Team Teaching (the joint work of two general educators in a double sized classroom) and how the formation of these

teams, whether self-selected or selected by administration affects their self-efficacy, collaboration, and job satisfaction. The authors explain how shared responsibility in the Team Teaching classroom can be most particularly important in delivery of high-quality instruction. When making selections in order to create a teaching team, teachers often mention how it may be helpful to select their teaching partners themselves, and that they “feel more effective and report higher job satisfaction when they could choose their partner on their own” (pp. 465-466). According to Krammer et al. (2018), “it must be assumed that voluntary colleague selection should have a positive impact on the collective self-efficacy perception and job satisfaction” (p. 466). The researchers hypothesized that “Teachers working in self-selected teams show higher ratings of collective self-efficacy expectations than their counterparts in institutionally composed teams” and “teachers working in self-selected teams report higher ratings of general job satisfaction than their counterparts in institutionally composed teams” (p. 468).

The data was gathered via an online survey from participants who had experience in joint teaching and had taught in at least one teaching team in the last three months. Three hundred twenty-one teachers participated in the survey of which 81% were female and whose average age was 46.8. On average, the participants had 22.1 years of teaching experience and 2.8 years of joint teaching experience. In order to assess the collective self-efficacy expectations, the Teacher Collective Self-Efficacy Expectations Scale was used along with the General Job Satisfaction Scale in order to determine their general job satisfaction.

This research found that the hypotheses regarding self-efficacy and job satisfaction were not supported by their overall data. Researchers stated, “the kind of team composition does not

have any influence on job satisfaction” (p. 474) and explained that this result may be because most teachers had extensive years of teaching experience in a traditional teaching model, whereas they had only had a limited number of years in teacher teams. Therefore, factors other than the freedom to select teacher teams seem to be more important in overall job satisfaction. According to the researchers, “self-selection of team partners is not a guarantee for successful and effective work” (p. 474). However, self-selection of teams may be important when deciding which teachers are compatible with whom and as “professional knowledge and experience of teachers can serve as an important source of information for the team composition process. Administrators should use this experience and knowledge of their teachers to create teacher teams” (pp. 474-475).

Another study completed by Krammer et al. (2018) set out to investigate factors that influence the collective self-efficacy of teacher teams such as a teacher’s co-teaching experience, general teaching experience, gender, or whether higher ratings of pleasure with the co-teaching process shows higher levels of collective teacher efficacy. The researchers explained how little research has been conducted solely on collective self-efficacy beliefs of teachers who work together in front of groups of students, unlike many studies done at the individual level or a more collective level such as all teachers at a certain school. Kramer et al. (2018) “explained, “to provide high quality co-teaching, a considerable number of prerequisites and skills are seen as important. Scholars reported prerequisites such as effective communication, relationship building or team building, adequate classroom management, shared responsibility, sharing of instruction and shared planning” (p. 102) along with others are of most importance when considering a successful team teaching environment.

A few of the hypotheses the researchers tested were

(i) it is assumed that teachers with more Co-teaching experience show a higher level of self-efficacy expectations than their counterparts with less Co-teaching experience, (ii) teachers with more general experience show higher levels of self-efficacy expectations than their counterparts with less general teaching experience, (iii) female teachers show lower levels of general self-efficacy expectations than their male colleagues. (p. 104)

Two hundred sixty-four teachers completed an online survey; 80% of the respondents were female. The average age of the participants was 46.9 years old; the average general teaching experience was 21.87 years, and the average co-teaching experience was 2.84 years. They used the Collective Teacher Self-Efficacy Expectations scale to examine collective CTE, and Are We Really Co-Teachers? scale to investigate co-teaching-related actions and skills.

The results showed that the number of years of co-teaching experience had no impact on CTE; therefore, they had to reject the first hypothesis. The results also showed that experienced teachers showed significantly less CTE expectations than less experienced teachers. This was unexpected; it also had to be rejected. There was also no significant effect revealed that the third hypothesis (female teachers showed lower self-efficacy expectations) was true. Based on their findings, all three hypotheses had to be rejected. “The overall results of this study suggest that team characteristics determined collected self-efficacy expectations of Co-teaching teams much more than individual characteristics of the social context in which a Co-teaching team worked” (p. 108). One factor that stood out from the research was how “pleasure during the Co-teaching process” (p. 108) seemed to be the most significant factor with having a positive impact on collective self-efficacy expectations, which refers to “a positive

emotional attitude towards Co-teaching, hence, to a positive emotional arousal that goes along with Co-teaching” (p. 110).

Kunnari et al. (2018) investigated the experiences of teacher teams in managing a time of curriculum innovation and change. The researchers analyzed five teacher teams on their protective and risk factors that had an impact on collective efficacy and resilience to change. The researchers essentially wanted to understand this phenomenon of teacher collaboration and which best practices help support teachers’ collaborative work in the most effective way. This study focused mainly on these teachers’ experiences about their teams managing change.

According to the authors, change can have both positive and negative effects. “Making the transformation from a traditional individualized working culture towards more collaborative work entails several changes which can also be experienced from the teachers’ perspective as both challenges and adversities” (p. 113). The aim of this study was to investigate what makes these teacher teams so successful and what may hinder their progress when change occurs. The three research questions included: “1. What changes did teachers experience as team members during the pedagogical innovation process? 2. Which factors did teachers as team members experience as both protective and risk factors? 3. How did teams differ in their process of adopting the new collaborative working model?” (p. 113).

This study consisted of five teacher teams consisting of three teachers each within a university (UAS in Finland) that was going through a pedagogical innovation process. Each team worked on the same learning modules for eight weeks. The data was collected through team interviews and individual teacher follow-up interviews. These interviews included the following themes: changes teachers experience, teacher inspirations/challenges, reasons for

success/failure, and new competencies needed. The interviews lasted about 60 minutes each, and the data was analyzed using the abductive strategy which utilized both deductive and inductive approaches.

In all, there were eight protective factors that contributed to collective efficacy and resilience toward change. One of these factors included students' motivation, inspiration, and engagement. According to the authors, "students' motivation had a significant impact on the teacher teams' experience of their collective efficacy. Also, successfully organizing 'peer learning and student collaboration' in learning created a good foundation for resilience in the new model" (p. 118). Another protective factor in relation to teacher's teamwork was their own development and broader consciousness. The teachers noticed that they could learn so much more from their teamwork and utilize mutual feedback to improve their practice. Along with the protective factors, there were also risk factors in the new model that impacted student learning. "The main issue diminishing experiences of collective efficacy was the 'obscurity of the new practices and unfit administrative tools'" (p. 120). Another risk factor that was related to this was the teacher's teamwork time management and excessive workload. This limited the teacher's capacity to plan and work as a team as effectively as they could. Overall, Kunnari et al. (2018) stated that "the main change the teachers recognized at the student level highlighted changes in the collaborative learning environment, such as teachers acting more like facilitators of learning and students more like collaborators" (p. 122).

Schmulian and Coetzee (2019) explored an experience of team teaching at the undergraduate level. The students' perspectives of the advantages and disadvantages of team teaching in contrast with the traditional model of one teacher per classroom was assessed and

analyzed. The researchers explored the contrast between team teaching and the most common “equal status model” (p. 318). The equal status model is defined as the division of content, activities, and course sections amongst teachers on the team.

The researchers administered a survey to students participating in the equal status model and the teaming model. These two separate cases allowed the researchers to examine the two different forms of teaching and conduct a comparative analysis. The participants consisted of 350 students (209 female, 141 male) between the ages of 20-21, who were majoring in accounting. The survey for both teaching models consisted of 14 statements which were measured on a Likert scale (1 = completely disagree; 5 = completely agree) and two open-ended questions. The participants were informed that the purpose of the survey was to compare and contrast the two teaching models.

The results of the study showed that the students felt significantly more positive about the advantages of the teaming model (teaming model = 3.52 as compared to the equal status model = 3.12). Sample student responses included “teaming is ‘more interactive’, ‘less stressful’, ‘it’s more fun’, ‘it’s more dynamic” (p. 323). The majority of students (79%) indicated that they’d like to be taught using the teaming model in future classes, and a smaller percentage of students (54%) would like to be taught using the equal status model. Also, according to the results, the students agreed that the team taught classes were more interesting (3.86). This response may indicate that the teaming classes provide different teaching styles and perspectives which may ultimately lead to greater understanding. While there were many reported advantages of the teaming model, there were also some disadvantages. According to the authors, “in terms of disadvantages of the teaming model, students commented that they

missed some structure in the class (73%), and, in particular, became confused when faced with more than one teacher in the class” (p. 325). To conclude, the authors noted that when considering a teaming model, teachers should consider the confusion and intimidation factor of this approach.

Simons et al. (2019) studied the development and validation of an easy-to-use questionnaire that measures learners’ perceptions of a team-teaching environment. The authors explained the importance of this questionnaire as stakeholders (teachers and policy makers) consider implementing a team-teaching approach in their schools. According to the authors, the focus ought to be/is on the learners’ perspective rather than the teachers’ perspective. They stated, “It is important to consider the perspective of all actors involved, including the learners, not only to provide insight into approaches to learning but also into learning outcomes. To date, the literature on team teaching has primarily focused on the teacher’s perspective rather than the learners’ perspective” (p. 47). An additional aim of this study was to explore the advantages and disadvantages the learners recorded in order to provide the benefits and challenges of team teaching.

The instrument’s development (Learners’ Team Teaching Perceptions Questionnaire) was created in four stages. The first stage included a literature review of the advantages and disadvantages of team teaching for learners. In the second stage, data was refined in order to create a preliminary questionnaire to measure learners’ perceptions of the advantages and disadvantages they experienced in a team-taught course. During the third stage, two 16-year-old female learners were asked to complete the questionnaire and provide feedback of clarity and length. This questionnaire included 18 items, along with three open-ended questions

which were: “1. Would you like to be taught in this way in the future? 2. Give at least one advantage and one disadvantage of this teaching format; and 3. Do you have any remarks about the lesson(s)/lecture(s)” (p. 49). Finally, the fourth stage was the validation process completed by making sure the questionnaire was implemented in two separate learning environments.

Based on the results, “learners mentioned more than twice as many advantages (n=633) than disadvantages (n=296)” (p. 54) when it came to a team teaching environment. Also, based on the results, “confusion” (p. 55) was the biggest disadvantage most often perceived by learners. Overall, the research was a success in meeting the objective, which was to develop and validate an easy-to-use questionnaire in order to evaluate whether team-taught lessons add value from the perspective of the learners.

Higgins and Litzenberg (2015) set out to research the costs and benefits of team teaching based on analyzing an instructional panel with professors at various experience levels. While there is plenty of research describing the benefits of team teaching, the researchers wanted to dig deeper into the benefits of the idea of senior faculty members transferring their knowledge and experience with teaching onto less experienced faculty members. The instruction team consisted of two faculty members and an industry professional in a capstone marketing course. The faculty had various experience levels; one teacher had one year of experience, another had 31 years of experience, and an alumnus had no teaching experience (but had 20 years experience in the marketing industry).

The researchers addressed four perspectives when considering team teaching: student, faculty, industry professional, and teaching administrators. The students of the teachers were given a survey; their responses were received and summarized. The purpose of this survey was

to gauge the perspectives of team-taught courses versus single instructor courses. In order to analyze the perspectives of students in the team-taught course, a second survey was administered to students enrolled in two junior-level courses taught individually by the faculty team members. According to the researchers, “the baseline course does provide additional insight into general perspectives on team teaching by students outside of the group of students exposed to this team teaching panel” (p. 106).

Based on student feedback, the results of this team-taught course suggested positive experiences overall. According to the researcher’s results,

when asked their agreement with the statement, ‘I wish more courses would use team teaching’ on a scale of 1 (strongly disagree) to 5 (strongly agree), the students in the baseline courses indicated that they were indifferent (average ranking of 3.0), while students that were in the team-taught course indicated that they were between agreeing and strongly agreeing with the statement (average ranking of 4.35). (p. 107)

Some benefits of team teaching the researchers explained was the “back and forth” between teachers. “When both faculty are in front of a class of students they can ‘play off each other’ and model effective teamwork for students” (p. 110). When considering a team teaching approach in schools, there are drawbacks that include increased budget costs. Overall, according to Higgins and Litzenberg (2015), “a team teaching approach can be seen as an investment in the future of educators in the department and in future students” (p. 110).

Garran et al. (2015) set out to research and review team teaching among faculty with diverse backgrounds along several domains such as social class, gender, age, race, and tenure

rank. The researchers discovered pedagogical strategies in their team teaching classroom with a central focus on social justice. According to the researchers, the importance of this research was “to facilitate discussions about emotionally charged, potentially polarizing current, real world events such as deaths of children and men of color at the hands of white policemen in the United States” (p. 800). The purpose of this research is to answer the following questions:

1. How does a team-teaching model help students understand social justice issues on a more profound level?
2. What work is required when using a team-teaching model?
3. What are the underlying dynamics around diversity that instructors need to anticipate and explore among themselves?
4. How can instructors be caring and supportive? (p. 800)

Each of the instructor teams consisted of six teachers. They spent about one and a half hours each week before class in face-to-face discussions about previous and future classes along with electronic communication during the week (3-4 hours). At the end of the course, students were evaluated and were asked to self-assess the core competencies of the class. They also completed an anonymous online questionnaire. The researchers explained the importance of school faculty having diverse and multiple social identities when considering a team-teaching approach. According to the authors, “This diversity provides modeling for students about how to dialogue and problem solve around difficult issues” (p. 804).

The results of the questionnaire were analyzed and represented on a numerical 1-5 scale (5 = highest) on questions such as “1. Overall I would rate this course as... 2. Overall I would rate this instructor as...” (p. 806). The results revealed that “multiple sections of the course, co-taught by different teaching teams are ranked between 4.3 and 4.9 out of 5.0” (p. 806). The

students' comments were powerful, and some even described the course as 'life changing' or the 'most important course that they have taken in the program'. Along with the positive feedback from students, the researchers also reported more than half of the respondents requested that the course should be required for two semesters, rather than just one.

Collaboration through Micro-Teaching

Kilic (2010) set out to study the effect of Learner-Centered Micro-Teaching (LCMT- a method of teaching where a small portion of a lesson is taught and teaching competencies are monitored under close supervision) and how this method affects teacher candidate's competencies. As a new teacher, it is imperative that I acknowledge and hone my teaching competencies by using various methods. In analyzing this research, and how they explained the significant effect of micro-teaching, it compels me to continue to reach out to leadership for continuous feedback and ways I can hone my craft of teaching in the classroom. The researchers explained how "teachers are not viewed as knowledge transmitters and skill models anymore; but as facilitators in the process of learning and in creating a learning-conducive environment" (p. 78). This learner-centered approach to teaching has taken off in more recent years, and according to the author in this study, "in several countries, curricula that emphasizes team-work, interactional skills, new market demands, and learner-centered teaching and learning approaches have been adopted" (p. 78).

In order to examine the effect of micro-teaching on the development of teacher candidates' teaching competencies, the teachers needed to be evaluated on their teaching behaviors on subject area, planning, teaching process, classroom management, communication, and evaluation. The participants were given a pretest and posttest, and teachers were then

observed based on an observation form devised with 39 items under the six topics given. The micro-teaching application was conducted according to LCMT, where two presentations given by the teacher were video-taped for examination. After the second presentation was completed, progress and any improvements that were needed were discussed.

The results were then drawn from the observation forms, which included examination of the six categories of teaching behaviors. In the subject area section of the observation, there were significant differences between the pretest and posttest scores, which illustrated the effectiveness of micro-teaching in teaching behaviors. The planning section of the observation showed that the pretest scores were high with a score of 3.91 and 3.66 on a scale of 4.0. Yet, the results show posttest scores of 4.0 and 3.95 respectively, which showed the effectiveness of this method. In the teaching process, there was also a significant difference in pretest and posttest scores. For example, in the “asking appropriate questions behavior” section, the pretest score was 3.04, and the posttest score was 3.25, which showed that this method was effective in this specific teaching practice. In the category “giving relevant examples and summarizing behaviors,” there was the biggest pretest/posttest difference (1.25 to 3.50), which indicated that these teaching behaviors were potentially easier to develop than the others. In the classroom management section, all behaviors except “appropriate transition to lesson” were found to have a significant difference among pretest and posttest scores, which was because the pretest was very high (3.84), indicating that this skill may be easier to develop in their classroom management skills. On the other hand, classroom management skills such as “grabbing attention and motivating” revealed a lower pretest score (0.50), which indicates that skill may not develop as easily as others. Finally, the communication and evaluation sections

both exhibited significant improvements from their pretests and posttests, which supported the effectiveness of micro-teaching. In conclusion, the LCMT model is beneficial for learners due to the effectiveness seen in all of the studied behaviors thought to enhance the teaching abilities among new teachers.

Göçer (2016) set out to study the effectiveness of micro-teaching as an instructional technique to help new teachers establish a sense of self confidence in their pedagogical practices. The term micro-teaching refers to an event cycle that starts by “videotaping a teacher candidate’s performance of certain micro skills. The videotape is then played back to the candidate for evaluative purposes. The candidate is allowed to repeat the performance while incorporating the changes suggested during the evaluation” (p. 34). Some essential questions included in this research were 1. Are teachers given adequate prevocational training before beginning their careers? 2. Does prevocational training provide student teachers with the necessary experience? And 3. Do student teachers feel mentally prepared for beginning their careers and devoting themselves to the profession?

A total of 16 third-year student teachers participated in this micro-teaching process in groups of three in authentic classroom environments. Göçer (2016) observed each of the participants in their classroom environments and conducted a six-question, semi-structured interview with each student teacher following the observation of the lesson. The videotapes of the lesson were then viewed with all three of the student teachers present. During this time, respective feedback provided by the group highlighted the positive aspects of the lesson. After performing in this micro-teaching activity, the student teachers listened to the feedback and made note of the positive and negative aspects. The data was then subjected to content

analysis (the collection of similar data within the framework of certain concepts and themes put into a conceivable order and interpreted).

The researchers discussed the results by explaining how student teachers “had the opportunity to apply their theoretical knowledge by means of the micro-teaching activities and thereby gained self-confidence thanks to the experience” (p. 44). Nine of the teachers explicitly stated that self-confidence was a direct result of this strategy. Respective participants’ comments included, “‘My sense of self-confidence has increased.’ ‘I’ve been acting more relaxed in the classroom since then.’ ‘I had so many doubts and I was lacking in confidence before micro-teaching’” (p. 39). In order to utilize the strategy of micro-teaching with new teachers, the consulting instructor must assess the teacher candidate’s prior knowledge and experience in the classroom before the process begins.

Chapter III of this thesis will summarize the other chapters and answer the overall research question. The information found from the research will be highlighted and will discuss various applications to be most important for teachers, school leaders, and stakeholders in education in Minnesota, The United States of America, and worldwide. The limitations of the research and implications for future research will be discussed. Finally, Chapter III will conclude through an analysis of the guiding question and final comments.

CHAPTER III: DISCUSSION AND CONCLUSION

This thesis explored the impact of self-efficacy, and unpacked it at three levels: school leadership, longevity and job satisfaction, and student achievement. There were also two innovative teacher collaboration methods, team-teaching, and micro-teaching, which I analyzed and showcased as an overall benefit for leaders to implement. This thesis provided a review of 30 teacher self-efficacy qualitative and quantitative studies that ranged from early childhood education to the university level. This review analyzed collective teacher efficacy and student achievement by uncovering ways to support teachers, increase trust, and enhance collaboration in order to increase levels of self-efficacy and collective teacher efficacy.

Seventeen studies were examined solely on the subject of collective teacher efficacy, with five including the impact of school leadership and organization (Brouwer, 2018; Goddard et al., 2015; Ninković et al., 2018; Prelli, 2016; Wei et al., 2014). Seven studies were analyzed on topic of the self-efficacy as it relates to longevity and job satisfaction (Hajovsky et al., 2020; Karabatak & Alanoglu, 2019; Kasalak & Dagyar, 2020; Ngui & Lay, 2020; Poulin et al., 2008; Somech & Drach-Zahavy, 1999; Vernon-Dotson & Floyd, 2012). Five studies addressed self-efficacy and the effects of student achievement (Engin, 2020; Hunt et al., 2012; Love et al., 2020; Mosoge et al., 2018; Parker, 1994). In order to examine the collaboration method of team-teaching, I analyzed 10 studies (Donohoo, 2018; Garran et al., 2015; Higgins & Litzenberg, 2015; Krammer et al., 2018; Kunnari et al., 2018; Leibel et al., 2016; Pope-Ruark et al., 2019; Schmulian & Coetzee, 2019; Simons et al., 2019). Finally, two significant studies were analyzed on the effects of micro-teaching on increased collaboration and teacher self-efficacy (Göçer, 2016; Kilic, 2010).

School Leadership and Collective Teacher Efficacy

The review included a total of six studies related to self-efficacy in both teachers and principals through different leadership practices. Brouwer (2018) found that the years of experience of the principal of the building were the only significant and predictive factors of higher levels of collective teacher efficacy. This study found that in order to support student achievement, stakeholders should seek to build leadership and longevity with a school's principal. Ninković et al. (2018) found that well known leadership practices such as strengthening the school culture and engaging parents and the wider community are not necessarily positively related to collective teacher efficacy; therefore there should be an increased focus on setting directions, such as developing a shared vision, communicating high expectations, and fostering group goals are key in a school's collective teacher efficacy. Goddard et al. (2015) highlighted the impact of principals' and teachers' efficacy beliefs on staff turnover rates and when given an opportunity to complete an efficacy leadership program, there was a reduction in staff turnover of 16% for principals and 5% for teachers. Finally, when considering implementation of leadership, it is important for administrative leaders and stakeholders to examine the ratings of collective teacher efficacy among grade-level teams and within their entire faculty before deciding which transformational leadership action to use.

Longevity and Job Satisfaction

An important finding by Somech and Drach-Zahavy (1999) related to the phenomenon of "extra-role behavior" when a teacher takes on an extracurricular activity within the community of the school. They found that teachers with higher collective efficacy, as compared to those with lower collective efficacy, were engaged more frequently in extra-role behavior toward the

school community. The study done by Kasalak and Dagyar (2020) aimed to identify the relationship between teacher self-efficacy and job satisfaction, and to explore how different countries compared to one another. They found that the average effect size of teacher self-efficacy on job satisfaction was 0.26-0.29, which demonstrated a statistically important relationship between the two variables. However, the effect size of teacher self-efficacy in relation to job satisfaction dropped as the years of service increased. The results from the reports from years 2008, 2013, and 2018 showed a decrease in the positive relationship between teacher self-efficacy and job satisfaction between 2008 ($r=.36$) and 2018 ($r=.23$). This indicated the opposite results of the researchers' prediction, for there actually was a decrease in job satisfaction over the ten years of the study. According to the researchers, "the fact that teacher self-efficacy is perceived higher at a time when access to information has become easier increases the importance of self-efficacy on job satisfaction" (p. 27). Another important finding from this study was that there wasn't a statistically significant relationship between teacher self-efficacy and job satisfaction when comparing different countries.

Self-Efficacy and Student Achievement

Hunt et al. (2012) discussed the importance of teachers taking responsibility for their delivery on lessons and not placing blame on outside indicators for student achievement. Instead of focusing on blaming the student for lack of motivation and parental involvement, the focus ought to be shifted toward teachers' own perceptions and attitudes. The goal should be aimed toward teacher's examining how effectively their role in the classroom changes as they improve their own skills in the classroom. Another outcome from the research by Engin (2020) revealed lower teacher motivation and self-efficacy in teachers with the least amount of

experience. In other words, teachers who had zero to five years of experience were less motivated than teachers with six-10, 11-15, and 16 or more years of experience.

Collaboration Methods through Team-Teaching and Micro-Teaching

In the study by Liebel et al. (2016), the results found that 65% of students participating remembered more after a lecture that was team-taught versus a lecture that was traditionally taught, which left only nine percent in the first year who disagreed. These results suggested that students comprehend the content much better when the team teaching approach is utilized. Schmulian and Coetzee (2019) also demonstrated the effectiveness of the team-teaching model. The results of their study showed the majority of students (79%) indicated that they preferred to be taught using the teaming model in future classes, and a smaller percentage of students (54%) prefer to be taught using a traditionally taught model. The results of the research completed by Göçer (2016) determined nine of the 16 teachers in the study explicitly stated that self-confidence was a direct result of the implementation of the micro-teaching strategy. As a new teacher, it is imperative that I acknowledge and hone my teaching competencies by using various methods. In analyzing this research, and how they explained the significant effect of micro-teaching, it compels me to continue to reach out to leadership for continuous feedback and ways I can hone my craft of teaching in the classroom.

Professional Application

Based on the overall results, school leaders and stakeholders in the United States as well as even globally should consider the effects of collective teacher efficacy when making decisions in collaborative learning models, leadership strategies, and teacher longevity. With the various studies on self-efficacy and school leadership, an emphasis placed on the principals' longevity

should be prioritized. There should be an increased focus on leadership setting directions, such as developing a shared vision, communicating high expectations regularly, and fostering group goals, which are shown to be essential in a school's collective teacher efficacy. Also, as school leaders become increasingly aware of the levels of collective efficacy within their own school, it will allow them to hone in on which type of leadership style would be best suited for their respective school communities.

For schools in Minnesota, the research has shown the effectiveness of implementing various collaborative methods of teaching such as the team-teaching and micro-teaching models. The results from this review demonstrated the overall effectiveness of the team-teaching model, resulting in the majority of students indicating that they'd like to be taught using the teaming model versus using the equal status model. Along with student satisfaction, there is a beneficial consequence for collaboration among teachers with various years of experience. In particular, for new teachers, the teaming model allows them the opportunity to engage with teachers with more experience, which creates an environment where they can learn from a more experienced teacher. A benefit in the other collaboration method, micro-teaching, may allow new teachers to increase their level self-confidence as they receive feedback from the micro-teaching strategy.

For teachers in the P-12 classroom, there needs to be an opportunity to engage in extra-role behavior by allowing the teachers freedom to take on leadership roles within their own schools in order to increase their level of self-efficacy. Teachers also need to self-monitor and take accountability of their own teaching effectiveness in order to increase levels of efficacy and student achievement. In this way, it would allow them to focus on honing specific teaching

skills rather than placing blame on external factors such as low student motivation and parental involvement.

Limitations of the Research

One possible limitation of the research done here includes findings that collected only data from the self-reporting of teachers and leaders, which may have affected the outcomes of the research. Another limitation of this study when analyzing teaching teams is the consideration of different working realities of teachers and how they may impact the results of a team-teaching approach. Another important limitation in most of these studies were the participants. Most participants were self-selected, therefore, the sample simply may not be representative of the actual population of teachers. An example of this was with the research done by Engin (2020), where the sampling was only received from teachers who chose to participate, and most of them (870 out of 1,486) had sixteen or more years of experience. These teachers with most experience may have higher levels of ease when working collaboratively than others. For instance, teachers that may be more satisfied with a collaborative approach or method of collaboration may be more likely to engage in a research study. Also, there was a pool of research that was limited such as research done for teaching teams and micro-teaching in the middle and high schools setting. As I researched this topic, there were only five studies done with secondary teachers that fit the criteria of the research, (Hunt et al., 2012; Kasalak & Dagyar, 2020; Krammer et al., 2018; Ninković et al., 2018; Vernon-Dotson & Floyd, 2012). I expected to see more research on secondary schools, whether it was practices to promote teacher self-efficacy in relation to student achievement or teacher-job satisfaction. I found there was a majority of elementary-level studies done on self-efficacy and leadership, job satisfaction,

and student achievement. There was also a distinct focus on university-level research studies in examining self-efficacy as a result of teaching teams, (Garran et al., 2015; Higgins & Litzenberg, 2015; Kunnari et al., 2018; Liebel et al., 2016; Schmulian & Coetzee, 2019). According to Higgins & Litzenberg (2015), “a team teaching approach can be seen as an investment in the future of educators in the department and in future students” (p. 110). This may indicate that a team-teaching approach is a potential innovative collaborative approach to consider in a school’s organizational strategy.

Implications for Future Research

Given what I’ve gathered in the research in the areas of collective teacher efficacy, I’ve found there is little research on the effectiveness of teaching teams in a secondary school setting in enhancing collective teacher efficacy. Along with that, there is little research on the effectiveness of teaching teams on student achievement. I’ve also noticed that there is a possibility of future research in the limitations a school leader or administrator may face when considering their school faculty’s level of self-efficacy and job satisfaction. There were many new questions that came up during the research that I’d like to continue to examine, such as 1) Why there would be such low levels of motivation for inexperienced teachers? 2) Could this low level of motivation among inexperienced teachers be caused by having few extra roles in their school community, thus not allowing them the increased satisfaction and motivation given when engaging in extra-role behavior? 3) Why was there no difference between data on teacher self-efficacy and job satisfaction when comparing other countries, especially when there are such drastic differences from individualistic and collectivist cultural structures? 4) Given that the longevity of principals in the school impacts collective teacher efficacy so greatly, what are the

biggest reasons for principal turnover? 5) What can principals do to enhance their overall job satisfaction, and in turn, have longevity in their school that enhances the well-being of their entire staff?

Conclusion

This review sought to investigate the ways in which school leaders may best focus on creating an environment conducive to increased levels of self-efficacy among teachers given the research on collective teacher efficacy. It also sought to identify ways to innovate this environment through different collaborative methods in order to positively impact student learning. Overall, stakeholders may be better equipped to serve their school communities when principals are given an opportunity to establish longevity in their respective buildings. The results from Brouwer (2018) showed that “longevity of the principal in the building contributes to teachers’ collective belief that they can positively impact student achievement” (p. 134). A recommendation for stakeholders is to seek to build leadership and longevity with a school’s principal. Principals must increase their focus on developing a shared vision, communicating high expectations, and fostering group goals. Based on the findings from Ninković et al. (2018), it was clear that the setting directions’ component was the most positive predictor of increased collective teacher efficacy. Leaders could work to increase their collective teacher efficacy by communicating group goals effectively, having high expectations of their faculty, and creating shared goals and vision. Teachers should be allowed more opportunities to engage in extra-role behavior toward the school community. According to the research by Somech and Drach-Zahavy (1999), teachers with higher collective efficacy, compared with those with lower collective efficacy, engaged more frequently in extra-role behavior towards the team. Leaders may wish to

focus on creating an environment where there are plenty of opportunities for teachers to take on leadership roles. Finally, the collaborative method of team-teaching should be considered in promoting collective teacher efficacy. As the research has shown, team-teaching proves to be an effective way to engage students. According to Higgins and Litzenberg (2015), “a team teaching approach can be seen as an investment in the future of educators in the department and in future students” (p. 110). Based on this review, stakeholders need to consider a team-teaching model when budget planning and enhancing school’s organizational makeup. In all, though research on collective teacher efficacy with an emphasis on school leadership and team-teaching in secondary school settings is still in the preliminary stages, the current research provides promising results. Future researchers may help schools in Minnesota and the United States make more thoughtful and informed decisions when considering whether these collaborative methods may be impactful toward their faculties and students. These methods may work to give school leaders such as principals and administrators tools to equip them with leading their staff toward a more unified school community.

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