

COLLECTIVE TEACHER EFFICACY: ITS INFLUENCE ON TEACHER BELIEFS
AND BEHAVIORS IN CLASSROOM INSTRUCTION

by

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Dedication

This dissertation is dedicated to my family, my parents, Sue Griesinger and Kenneth Shindler, and my children, Jessica Nichols and Michael and Jonathan Mendoza. Each of these amazing people have supported me throughout this entire process with love and understanding, each in his or her own way. As I take a moment to gather my thoughts, I am daunted by the impossibility that words can capture what I would like to share with you.

To my parents, who gave me the foundation upon which I now stand. You were my first encouragers and advocates. Although college degrees were not the norm in our extended family culture, somehow, you always knew that my journey would include university life. I don't know if any of us would have predicted that I would make it quite this far. Your confidence in my ability, shared with me beginning in early life, is the reason I am who I am. Because of you, I am observant, independent, confident, and persistent. Each of these attributes has served me well. Thank you both for allowing me the freedom to be who I am, no matter how odd I must have seemed over these years.

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Dad, your words are fewer. Your emotions are worn in your eyes. You gave me that trait, as well. You communicate your admiration of the person that I have become by the way that your eyes shine when we are together. I'm smiling as I remember the times that you've called me on my birthday at the exact time of my birth. And, as I remember the times you tried and technology failed. I can imagine you waiting for just the right moment with your phone in your hand.

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ABSTRACT

COLLECTIVE TEACHER EFFICACY: ITS INFLUENCE ON TEACHER BELIEFS AND BEHAVIORS IN CLASSROOM INSTRUCTION

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The purpose of this mixed methods study was to examine the influence of collective teacher efficacy (CTE) on teacher beliefs and behaviors that result in engagement of all students and persistence with those who struggle academically. This study consisted of eight high school teachers of English, mathematics, science, and social studies who each participated in a survey, an interview and a classroom observation. Data analysis allowed the researcher to make connections between participant scores of the Collective Teacher Beliefs (CTB) Instructional Strategies subscale, responses to interview questions, and observations made during classroom visits. Teachers scores on the CTB scale ranged from 5.50 to 8.83 on a nine-point Likert scale, which translated into degrees of CTE of “to some degree” to “a great deal”. Overall results of this study indicate teachers’ beliefs and behaviors regarding communicating high expectations for student learning, persistence with students who struggle academically, and promotion of student autonomy are consistent with their scores on the CTB scale and past research on CTE. Furthermore, the results of this study show that teachers with a higher score on the

CTB scale utilize strategies that promote student goal setting, initiate and maintain student engagement, and monitor the progress and performance of all students during instruction more consistently than those teachers with a lower sense of CTE.

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CHAPTER I: INTRODUCTION

In 2015, President Barack Obama signed the *Every Student Succeeds Act* (ESSA), which reauthorized the 1965 *Elementary and Secondary Education Act* (ESEA) while moving away from the *No Child Left Behind Act* (NCLB) and its federal accountability driven attempts at improving education. While the ESEA and NCLB were created to increase achievement of traditionally underserved students, the focus is to establish systems that support the success of *all students* (Darling-Hammond et al., 2016). Each of the prior mandates targeted student success; however, the focus and intent of *success of all students* found in ESSA provides foundation of inquiry for this study.

A nation-wide focus on which schools' actions best promote student success has existed for over 50 years (Marzano, 2003). Throughout the same time-span, educational researchers have set out to determine which variables positively impact student learning. One prevalent research question has been whether the teacher is the determining factor of student success. Hanushek (1971) conducted a statistical analysis that measured the influences of factors such as entering achievement level, family inputs, peer influences, innate ability, and school inputs on student achievement. The goal of the study was to answer three questions connecting public policy to educational outcome: "(a) Do teachers count? (b) Are schools operated efficiently now?, and (c) What characteristics of teachers and classrooms are important?" (Hanushek, 1971, p. 280) The results of this statistical analysis indicated that hiring practices that focus on teacher years of experience and teacher levels of graduate education do not contribute to student achievement and are, therefore, inefficient. The researcher also concluded that the models used to determine specific teacher and classroom characteristics that produce favorable educational outcomes did not produce clear results. Hanushek (1971) explained that teachers do count

in his model of measuring educational outcomes. In other words, differences in teachers produce different levels of achievement in students. Hanushek called for improvements on measuring teacher characteristics and classroom behaviors because he found that characteristics of more effective teachers were not what schools pursue when hiring new or additional staff. Hanushek found that effective teachers scored higher on a nationally normed assessment of verbal acuity, had more recent personal educational experiences, and spent less time in class on disciplinary actions. At the time of this study, years of teaching experience and number of graduate level credits appeared to be important factors in hiring teachers.

Research conducted more recently by Nye, Konstantopoulos, and Hedges (2004) indicated that significant differences exist in achievement of students of effective teachers. Findings in this study also suggested that when including student socio-economic status (SES) as a factor, a comparison between low- and high-SES schools indicated positive teacher effects in low-SES schools are larger than those in high-SES schools. Researchers suggested that the larger effects found in the lower-SES school may be due to the uneven distribution of teacher effectiveness in low-SES schools as compared to the more evenly distributed teacher effectiveness in high-SES schools. Therefore, researchers claim, in a low-SES school, which teacher a student receives is of great importance.

Aaronson, Barrow, and Sander (2007) conducted a study on teacher effects in which secondary-level students were given the Iowa Test of Basic Skills (Lindquist & Hieronymous, 1956) as the before measurement and the Test of Achievement and Proficiency (Riverside Publishing Company, 1989) as the after measurement. Researchers found clear and significant differences in student achievement by teacher; additionally, students of more effective teachers were found to make twice as much

progress as those taught by less effective teachers. Within the same study, researchers categorized teachers into four groups by levels of effectiveness and compared these categories from one year to another. Findings indicated that the least effective teachers tended to remain within the lowest ranked of the four groups and that the teachers ranked in the most effective group tended to remain in that group over time (Aaronson, Barrow, & Sander, 2007).

While these studies indicate a relationship between student success and teacher effectiveness, the most likely place to look to determine factors that influence student success would be where the learning takes place, the classroom. Studies have shown that what happens in the classroom, the act of teaching, is a critical determining factor of student success (Palardy & Rumberger, 2008; Stronge, Ward, Tucker, & Hindman, 2008). However, identifying a comprehensive set of instructional strategies practiced by effective teachers proves to be an elusive task. Marzano, Pickering, and Pollock (2001) completed a meta-analysis of research on classroom instruction and compiled a list of nine strategies that result in high effect sizes. This list includes teacher actions (setting objectives and providing feedback), student tasks (summarizing and note taking), and student grouping/participation structures (cooperative learning).

In an effort to determine what works best in schools, Hattie (2008, 2012, 2015) conducted meta-analyses of influences of student achievement. These combined analyses of approximately 80,000 studies resulted in the ranking of 252 distinct factors and their effect sizes. The average effect size of all items was determined to be 0.40; therefore, Hattie described factors that have effect sizes ranging from roughly 0.10 to 0.39 to have a low effect, those with effect sizes ranging from roughly 0.40 to 0.79 to have a medium effect, and those with effect sizes from roughly 0.80 and above to have a high effect. The most recent iteration of this list was completed in 2017 (Hattie & Zierer, 2017). This

ranking contains teacher- and teaching-based factors that have a medium to high effect size, including collective teacher efficacy (1.57), teacher estimates of student achievement (1.29), cognitive task analysis (1.29), classroom discussion (0.82), feedback (0.70), formative evaluation (0.48), and questioning (0.48).

According to Hattie's meta-analysis, collective teacher efficacy (CTE) has the highest effect on student achievement of the 252 factors listed in the study (Hattie & Zierer, 2017). Collective teacher efficacy is described by Goddard, Hoy, and Woolfolk Hoy (2000) as teacher perceptions that their combined efforts will positively influence student success. Teachers who hold this belief have been found to exhibit a common set of behaviors and attitudes that support positive student outcomes, including communication of high expectations for learning, commitment to students and to the teaching profession, flexibility in trying new approaches to instruction, promotion of student autonomy through student-centered instruction, and exhibition of greater effort and persistence when working with students experiencing difficulty in learning (Donohoo, 2017; Donohoo, 2018; Hattie, 2017). Each of these behaviors and attitudes work to improve student learning; however, the question remains as to which specific classroom actions connect CTE to student success.

Educational leaders and classroom teachers are challenged in determining how to best address the learning needs of all students and must examine research that points to teacher and teaching effectiveness. This study will attempt to determine a connection between CTE and high-effect instructional strategies and to clarify specific teacher actions that target success for all students. A research problem and purpose for the study will be established, and key questions will be designed in order to provide a guideline for this study. Furthermore, definitions of key terms will be provided for clarity and precision.

Research Problem

Wiliam (2011) described formative assessment as a process that improves teacher instructional practices. He further ties formative assessment to questioning and feedback by suggesting two reasons to ask questions in class. The first is to cause thinking and the second is to inform the teacher of next steps. Hattie and Timperly (2007) expanded upon this thinking by promoting three questions that must be answered throughout the formative assessment process: Where am I going? How am I going? and Where to next? The last two questions connect with Wiliams' thinking.

Cauley and McMillan (2010) detailed the ways in which effective teachers use formative assessment to drive their instructional practices. These researchers contrasted formative and summative assessment by explaining that summative assessment merely records student current levels of mastery while formative assessment is used by effective teachers to “identify specific student misunderstandings, provide feedback to students to help them correct their errors, and identify and implement instructional correctives” (Cauley & McMillan, 2010, p. 1). Within the midst of these teacher behaviors, students are encouraged to correct their mistakes prior to turning in an assignment, which could result in higher levels of confidence by building student mastery experiences and increasing their self-efficacy. Implementing this level of formative feedback may result in students being able to build academic goals and become conductors of their own learning pathways. Cauley and McMillan contend that utilizing formative assessment in these ways result in student motivation and high levels of engagement and success.

Significance of the Study

This study will contribute to the field of educational research by connecting CTE to specific teacher instructional practices that engage all students in the learning process and show persistence with struggling students. The results of this study can be used by

district and school leaders as they make decisions regarding professional development and structures that promote teacher collaborative practices.

Research Purpose and Questions

The purpose of this study was to examine the influence of CTE on teacher beliefs and behaviors that result in engagement of all students and persistence with those who struggle academically.

The research questions for this study are as follows:

1. How does CTE influence teacher behaviors that promote all-student participation during instruction?
2. How does CTE influence how teachers react to students who are reluctant to participate during instruction?
3. How does CTE influence teacher behaviors that promote all-student learning during instruction?
4. How does CTE influence how teachers promote student autonomy during instruction?

Definitions of Key Terms

Collective Teacher Efficacy – the perceptions of teachers in a school that efforts of the faculty as a whole will have a positive effect on students (Goddard, Hoy, & Woolfolk Hoy, 2000).

Formative Assessment – classroom practices such that the evidence about student achievement is elicited, interpreted, and used by teachers, learners, or their peers, to make decisions about the next steps in instruction that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited (Black & Wiliam, 2009).

Formative Feedback – information that moves learning forward, that is used by the learner in improving performance (Wiliam, 2011).

Student Engagement – a multi-dimensional construct that includes behavioral (participatory), emotional (positive and negative reactions), and cognitive (investment in learning) engagement (Fredricks & McColskey, 2012).

Conclusion

This chapter provided a purpose for the need to examine the relationship between CTE and instructional practices that engage all students in the learning process and show persistence with struggling students. The results of this study could help district and school administrators make critical decisions regarding professional development for teachers. Chapter two will provide a deeper discussion of the literature related to collective teacher efficacy, formative assessment, and teacher instructional practices that promote student engagement.

CHAPTER II: REVIEW OF LITERATURE

The purpose of this study was to examine the influence of CTE on teacher beliefs and behaviors that result in engagement of all students and persistence with those who struggle academically. This study will measure CTE among its participants and will analyze teacher behaviors classroom instruction, and self-reported behaviors during individual interviews to uncover connections between degree of CTE and teacher instructional practices that engage all students in the learning process. This literature review will focus on: (a) collective teacher efficacy, (b) formative assessment, and (c) student engagement.

Collective Teacher Efficacy

Teachers are charged with planning for and enacting pedagogical moves that ensure that all students will learn; for teachers working in isolation, this practice can prove to be a daunting task. Bandura (1993) contended that “teachers operate collectively within an interactive social system rather than as isolates” and that educational enhancement must target the social and organizational structure of school systems (Bandura, 1993, p. 141). In doing so, teachers and administrators must focus their energies on structures and behaviors that are within their control. Having an understanding of the countless factors that influence whether and how well a student learns is essential for teachers and educational leaders. More importantly, teachers must have knowledge and skills in pedagogical moves that have been shown to have the highest influences on learning.

Hattie (2012, 2015, 2017) shared not only what works, but what works best in education as evidenced by synthesis of 1200 meta-analyses of 252 factors that influence student learning. Many of these factors are described as either methods or as attributes of

teaching. The meta-analyses indicated that many distinct teaching methods influence achievement, and certain attributes of teaching that have the greatest impact. One such attribute is collective teacher efficacy, which is defined as the perceptions of teachers in a school that efforts of the faculty, as a whole, will have a positive effect on students (Goddard et al., 2000). While the average effect size of all of the factors listed within Hattie's meta-analysis was 0.40, CTE has an effect size of 1.57. This indicates that CTE has an effect size that is nearly four times the average of all other factors being considered. A difference this large establishes a need for deeper inquiry into the foundations of this construct and into the behaviors and beliefs of teachers who report having CTE.

Foundations of Collective Teacher Efficacy

CTE has its roots in Bandura's Social Cognitive Theory (Bandura 1977, 1986, 1997) which established that people have command of their behaviors and beliefs within socially structured interactions and, as a result, have control over certain actions and outcomes. This self-efficacy is the foundation of human agency and reaches collective efficacy when the beliefs and behaviors of the individual become those of a collaborative group. According to Bandura (1997), four factors that contribute to efficacy beliefs are: mastery experience, vicarious experience, social persuasion, and affective states.

Mastery experience, when considered or interpreted as being successful, may lead an individual to have more confidence in those areas of success; those experiences perceived as unsuccessful will most likely lead to a lack of confidence (Ramos, Silva, Pontes, Fernandez, & Nina, 2014). Goddard, LoGerfo, and Hoy (2004) explained that within a school setting these experiences may be related to instruction that leads to student achievement. When teachers perceive themselves and their coworkers as collaborative agents of student success, the sense of efficacy translates from the self to

the collective. Another factor that brings about efficacy beliefs, vicarious experience, occurs as learning takes place from observing others. In the same ways that an individual can learn from and gain a sense of efficacy from the modeled successful behaviors of another with whom they identify, the perceived collective efficacy of a group can be enhanced by observing successful organizations. For example, schools may look to the successes of other schools to discern those actions or behaviors that lead to the success and then emulate those organizations to gain similar results.

When a supervisor, or colleague, provides encouraging, constructive feedback, a third factor that contributes to efficacy beliefs, social persuasion, is enacted. This behavior can be especially valuable to help overcome temporary obstacles to goal achievement, and the effectiveness of social persuasion is dependent upon the credibility and expertise of the persuader (Bandura, 1986). In schools, social persuasion addresses the needs of the group through effective professional development, faculty meetings, and feedback given in group settings. Normative expectations and organizational goals are inspired and created through social persuasion (Goddard, LoGerfo, & Hoy, 2004). A fourth and final factor that influences efficacy beliefs is called affective states. Just as stress and excitement can affect an individual's self-efficacy, they can influence the ways in which an organization reacts to certain events. For example, whether a school as a whole does well on state accountability measures can cause a great deal of anxiety across the faculty. The more efficacious the group, the more likely they will be able to positively react in the event of perceived failure to do well. Researchers contend that each of these factors, mastery experience, vicarious experience, social persuasion, and affective states influence individuals and groups by creating a set of perceptions resulting from the ways in which events are cognitively and metacognitively processed. Self- and collective

efficacy stems from the ways that humans internalize the world around them (Bandura, 1997; Goddard, LoGerfo, & Hoy, 2004).

Behaviors and Attitudes Related to Collective Teacher Efficacy

Tschannen-Moran and Barr (2004) provided a definition of teacher collective efficacy as being a “collective self-perception that teachers in a given school make an educational difference to their students over and above the educational impact of their homes and communities” (Tschannen-Moran & Barr, 2004, p. 190). Given the importance of student success, determining the specific teacher behaviors of those who hold this collective belief is critical. Donohoo (2018) reviewed and summarized existing research on CTE in order to delineate those behaviors. This researcher analyzed 34 separate studies for findings that related teacher behaviors and CTE. Results of this study illustrated a number of CTE related teacher behaviors that potentially increase student success. These teacher moves include teachers taking on leadership roles and strong implementation of school-wide improvement strategies. The work of these educators was influenced by the high expectations they set for all students and by a tenacious focus on academics. Furthermore, instances of CTE resulted in greater risk taking, more open-mindedness when introduced to new ideas, and greater inclusivity of students who tended to exhibit problem behaviors.

Researchers have studied teacher attitudes toward the teaching profession as they relate to CTE, as well. Perceived CTE translates into more teacher leadership and a greater commitment to the teaching profession and to students and parents. When a school’s culture indicated a faculty-wide belief that they can meet student needs and overcome obstacles, new teachers are more likely to continue in the profession. Collectively efficacious teachers also view professional development in a positive light,

report greater job satisfaction and less stress (Derrington & Angelle, 2013; Lim & Eo, 2014; Wilcox, Angelis, Baker, & Lawson, 2014).

Formative Assessment

Black and Wiliam (1998) provided a powerful argument for the need for the provision of professional development for teachers to gain a thorough understanding of the formative assessment process that can be implemented to raise learning standards for all students. These researchers reviewed 580 journal articles and book chapters in response to the following questions: Is there evidence that improving formative assessment raises standards? Is there evidence that there is room for improvement? and Is there evidence about how to improve formative assessment? Their extensive review of nine years of accumulated research and literature resulted in a resounding, yes, to each of these questions.

Research regarding the effects of formative assessment on student achievement indicates that formative assessment experiments yield effect sizes from 0.4 to 0.7, which are larger than effects found in most educational interventions. The researchers explained that an effect size of 0.4 would produce an educational gain of one to two years of instruction for students. Furthermore, the researchers found that in most studies, improved formative assessment produces higher gains in lower achieving students (Black & Wiliam, 1998) than in other students, which would decrease the gap in achievement between these groups while raising the overall achievement. Black and Wiliam stressed that producing these types of results would involve changes in current common instructional practices. For example, the ways in which teachers interact with students through feedback would require new teaching methods. Students must be actively involved in the feedback process. Information gathered through formative assessment must be utilized to adjust teaching and learning. Furthermore, attention must be given to

the ways in which assessment is used to motivate students and to increase their self-esteem. Finally, students must be engaged in self-assessment.

In response to the question of whether room for improvement exists, the researchers consolidate the various documented concerns regarding assessment into the following three groups: effective learning, negative impact, and the managerial role of assessment. Black and Wiliam (1998) summarized research on assessment and effective learning into various ways in which teacher assessments are inconsistent with their instructional objectives or are not aligned within the same school or grade level. Teacher assessments, they explain, rely on rote memorization or are superficial in nature, or appear to value quantity of demonstration or presentation of work over quality representations of student learning. Furthermore, teachers do not tend to share their questions with others working in the school, and assessments are often given without being reviewed for alignment to what they are meant to evaluate.

The researchers made the following statements about the negative impact of assessment on students. An over-emphasis on giving grades or marking student work for grading purposes and a lack of providing students with useful advice exists. Also, assessments are often used to compare students against one another, which creates competition over self-improvement. Placing students in competition with one another through comparisons between levels of success is especially destructive for struggling students. The final group of concerns illustrating the need for improvement are characterized by the managerial role of assessments. Black and Wiliam (1998) found that the feedback given to students is often managerial, rather than directed toward learning. Also, teachers focus on filling up a gradebook rather than attending to the authentic evaluation of student work to improve learning.

Finally, Black and Wiliam (1998) provided a detailed account of the evidence of how formative assessment might be improved. The first point made by the researchers is that students are the ultimate users of the assessment information. The negative side of this proclamation is that in many educational systems students are faced with being compared to one another rather than encouraged toward self-improvement. For a student who rarely sees success, this situation can be quite harmful. Students who are accustomed to success might do well, however. These negative outcomes are not inevitable. In a culture or system that holds that all students can achieve, formative assessment that encourages the student to utilize their own data to improve their learning can be a powerful process. Therefore, feedback must be about the qualities of a student's work and should offer suggestions for improvement. Feedback should never be used to compare students to each other.

The second point made by Black and Wiliam (1998) is that students need to be taught how to assess their own learning. In order for students to be successful in doing so, they must have a clear understanding of their own learning goals and of what success looks like. Third, opportunities for students to express their learning must be incorporated into all instruction. These strategies are the means by which formative assessment moves learning forward. These occasions are often found within the bounds of classroom discussions. Fourth, Black and Wiliam stressed that students must be provided with thought provoking questions that require think time and extended response. Therefore, teachers must carefully plan these events and use caution by not moving through them too quickly and by not answering their own questions, which often happens. Finally, the researchers claimed that tests and other assignments must be relevant to the learning, feedback on these should give students ways to improve, and students must be provided time and help in making those improvements.

In closing, Black and Wiliam (1998) explained that in order for formative assessment systems to be most effective, two considerations must be made. The first pertains to the teacher's beliefs about learning. If the teacher believes in a system in which knowledge is transferred from teacher to student, then formative assessment is not of much use. Formative assessment enhances an instructional environment built on shared interactions between teacher and student that prompt deep thinking and discussion. The second consideration is the teacher's beliefs regarding the learning potential of all students. Whether the teacher believes that intelligence is fixed or malleable makes a difference in the effective implementation of formative assessment. Formative assessment works best when a teacher holds that all students have potential and can learn.

Implementing a System of Formative Assessment

Wiliam (2011) suggested three key processes and three participants exist within a system of formative assessment. The processes involve: assessing where the learners are within the learning, finding out where the learners are going, and determining how to get learners to mastery. The participants consist of the teacher, learner, and peers. Combining these processes and participants results in a detailed system of formative assessment comprised of five strategies. The first strategy is "clarifying, sharing and understanding learning intentions and criteria for success" (p. 51). This strategy entails teachers determining specific learning intentions for a unit of study and then clearly communicating those goals to students. Learning intentions contain targeted goals and details on how mastery of these goals will be evaluated. Sharing these learning intentions requires a conversation between teacher and learner so that the learner is clear on their role in the process because learners do not always share the thinking of the teacher about what they are expected to know and be able to do at the end of a lesson. Wiliam pointed out

that sharing learning intentions with students is a relatively new strategy and warned that the ways in which many districts require that teachers share objectives with students at the beginning of the lesson is not the intention of the strategy. Teachers are meant to communicate learning intentions with students and then follow through with examples of quality work so that students fully understand what is expected of them.

The second strategy embedded within this system of formative assessment is “eliciting evidence of learners’ achievement” (Wiliam, 2011, p. 71). This strategy is a response to the process that involves determining where the learner is within the learning. Wiliam explained that teachers generally plan lessons that present students with engaging activities. Rarely do they also plan a means to effectively assess whether the students are successful within the act of learning. He, therefore, suggested that teachers focus not only on planning for student learning, but also planning for evaluation of student learning during instruction. Using questioning during classroom discussion is a practical strategy used to ascertain whether students are being successful in their learning. Wiliam maintains that in asking questions of students, teachers should focus on two objectives: to instigate thinking on the part of the learner, and to listen for clues within student responses that give the teacher direction on what to do next. He further advocates that allowing students to act as volunteers in responding to teacher questions furthers the achievement gap by creating a lack of accountability on the part of non-participatory students.

The third strategy described by Wiliam (2011) is “providing feedback that moves learning forward” (p. 107). Wiliam contended that in order for students to progress in their learning, they must be provided effective feedback; however, providing this type of feedback may be more complex than it seems. He advised that in order for teachers to utilize feedback effectively, the feedback must cause thinking and not focus on an

emotional response. Also, feedback should reference the learning intentions and entail work on the part of the student. Finally, feedback should lead students to become owners of their own learning, rather than to remain dependent upon the teacher or other external factors to promote change.

The fourth formative assessment strategy is “activating students as instructional resources for one another” (Wiliam, 2011, p. 133). According to Wiliam, providing opportunities for students to provide feedback to one another is beneficial to both the giver and receiver of the information. A number of cognitive benefits stems from interactions when peers give and receive feedback. Students gain a more comprehensive understanding of the learning intentions and the criteria for success in meeting goals. Furthermore, interactions between peers tend to be less emotionally charged, which lowers students’ affective filters. Wiliam specifically referenced cooperative learning as a means of engaging students as resources for one another and describes four main factors that contribute to the success of these strategies: motivation, social cohesion, personalization, and cognitive elaboration. Students are motivated when working with, or helping, their peers because it benefits them to do so. Regarding social cohesion, students help their peers within cooperative structures because they care about the group. Learning becomes more personalized when students work with more able peers who can help them with content that they find difficult; and students who are able to help peers who are struggling are then practicing cognitive elaboration as they think through ideas more deeply.

The fifth, and final, key strategy put forth by Wiliam (2011) is “activating students as owners of their own learning” (p. 145). Here, the researcher proposed that the teacher has the responsibility of designing and enacting situations in which learning takes place, but only learners create learning. This strategy involves engaging students as self-

assessors and as self-regulators of their learning and is highly elusive in the classroom setting. Each of the four prior strategies within the system of formative assessment described by Wiliam build to this final goal. Some of these strategies are integral in creating situations that enact students as owners of their own learning. For example, sharing learning intentions with students allows them opportunities to formulate their own learning goals and to monitor progress toward reaching them. Promoting a growth mindset, where ability is incremental rather than fixed, is a facet of effective feedback, as is deemphasizing student to student comparison when measuring achievement. Another effective feedback move that supports students in becoming owners of their own learning is supporting student understanding of what comes next in learning.

Formative Assessment and Student Motivation

Cauley and McMillan (2010) defined formative assessment as “a process through which assessment-elicited evidence of student learning is gathered and instruction is modified in response to feedback” (p. 1). These researchers proposed five teacher behaviors related to formative assessment that can increase student motivation for learning. The first behavior is to provide clear learning targets for students. This initial step ensures that students have an understanding of their learning goals and allows them the potential to set their own goals and to self-assess their mastery toward those goals. Additionally, when teachers provide targeted examples of the work, students are able to set realistic sub-goals or tasks to complete as they approach the final objective. Successful completion of these smaller tasks helps to increase student motivation as they work to completion of the larger goal.

A second action that teachers can take toward motivating students through formative assessment is to offer feedback on their progress. The researchers describe multiple facets of providing appropriate feedback. For example, sharing specific

misunderstandings or misconceptions and then explaining to students how they can make adjustments in their approaches to the tasks can help build confidence and positive expectations that they will complete the task successfully. Cauley and McMillan (2010) explained that timing is important for the effectiveness of feedback, depending on the success levels of the students. Lower achieving students thrive best when given immediate, highly specific feedback, while higher achieving students work best when feedback is delayed. Another technique described by the researchers is one in which teachers roam about the classroom, observing student work and asking them to explain their work, or offering suggestions for improvement. Also, the researchers warned against teacher feedback that compares students to one another. This type of feedback would more likely lessen, rather than enhance, motivation for students.

A third practice recommended by Cauley and McMillan (2010) is to attribute student success and mastery to effort. Effective implementation of this practice reveals teachers attributing positive results to student effort and then considering adjustments in instruction and learning tasks. This behavior can be contrasted with behaviors that decrease student motivation such as: showing a student pity after failure, praising success of an easy task, or offering unsolicited help when students are not in need of assistance. Although well intended, these messages are likely to decrease student motivation.

The fourth suggested behavior is to encourage student self-assessment. Cauley and McMillan (2010) explained that formative assessment yields high levels of student-self assessment and involves three steps: student self-monitoring, self-evaluation, and identification and implementation of further learning to enhance their understanding or skills. Student self-assessment leads to student autonomy through which students are owners of their own learning. Students understand what is needed to be successful when

given a specific task, are able to design their own pathways in meeting learning goals and have expectations for success.

The final formative assessment practice that leads to enhanced student motivation is helping students set attainable goals for improvement. The key in this behavior is guiding students in setting goals related to specific performance standards because a student's recognition of their own successful performance results in higher self-efficacy. The student's self-efficacy develops as their belief that the efforts that they put forward can produce positive results. Having an identifiable performance goal allows the student to recognize when they are successful.

Formative Assessment and Questioning

Heritage and Heritage (2013) examined how teacher questioning practices supported and extended student learning during classroom instruction and discourse. They aimed to define pedagogical moves that constitute formative assessment and to determine whether observable behaviors exist that support teacher and student interactions. These researchers laid a foundation for the research by describing formative assessment as a reciprocal practice between students and teachers and that teachers are responsible for collecting data that informs instruction as students are learning. In other words, teachers are tasked with establishing a baseline for student understanding of a particular concept or skill and then move that understanding forward. The teacher must support the student by evaluating a student's current level of mastery and then stretch the student learning through targeted pedagogical moves. This thinking is founded in the work of Vygotsky (1978) who described learning as a social process through which learners interact with more knowledgeable others as their cognitive structures develop. Vygotsky theorized two levels of learner development: one in which the student currently operates independently and one of which the student has the potential to acquire. This

second level is called the *zone of proximal development* (ZPD). Working within the ZPD allows teachers and students to work collaboratively in advancing student learning.

Heritage and Heritage (2013) analyzed two hours of videotaped instruction in a fifth-grade writing classroom. Using a qualitative method for analyzing teacher-student interaction, conversation analysis (CA), these researchers were able to capture and describe discourse between one teacher and two students. The interactions with these students were consecutive, one-on-one formative assessment sessions. The students involved in the study were described as operating within different levels of development in their learning and requiring a diverse set of teacher questions and responses. The teacher is described as having non-threatening questioning practices that are collaborative in nature. Due to student diversity in levels of ability, the teacher is required and able to work on the edge of uncertainty, within the student's ZPD, moving student learning forward. Throughout the process the teacher evidences her abilities to capture the students within their current understanding and then question and prompt the students as she supports them to the next level. In some instances, the process requires the teacher to loop backwards into student understanding in order to move forward in the next interaction. All of this is possible, according to the researchers, because the methods of inquiry used are routine in this classroom, and the teacher has established a respectful rapport with the students. Furthermore, this teacher exhibits a deep knowledge of pedagogy and of the content she is teaching.

Heritage and Heritage (2013) suggested further investigation of formative assessment practices at a more granular level. This type of observational analysis, in real-time, can be used to further teachers' understanding of formative assessment and to help improve those practices. A study conducted by Lee and Kinzie (2012) provided insight on how the influence of the types of questions that teachers ask on the cognitive levels at

which students think and respond. These researchers performed a qualitative study in which teachers were asked to submit video recordings of classroom activities and to participate in interviews, both as part of a pilot evaluation of a mathematics and science curriculum. Teachers' questions were analyzed using an apriori coding system to quantify open- and closed-ended questions; meanwhile, student responses were examined and then patterns of language and cognition were identified and described.

Findings in this study indicated that teachers utilized many more closed-ended questions than open-ended ones. When a mix of the two occurred, the teacher usually began with an open-ended question and then followed up with a closed-ended question when students struggled to respond to the initial prompt. Furthermore, open-ended questions that expected students to predict and use reasoning were likely to result in students' responses that indicated higher levels of cognition than closed-ended questions that focused on recall.

Student Engagement

Fredricks and McColskey (2012) discussed a growing interest in student engagement as researchers, educators and policymakers attempt to address problems of student low achievement, alienation, and high drop-out rates, especially among students with disadvantaged backgrounds. These researchers explained that student engagement has been defined by scholars as multidimensional constructs including behavioral, emotional, cognitive, and psychological components. For their definition of student engagement, Fredricks and McColskey focused on three of these dimensions: behavioral, emotional, and cognitive engagement. Behavioral engagement centers around student participation and includes involvement in a number of school related areas, such as academic, social, and extracurricular activities. Emotional engagement pertains to positive and negative reactions to teachers, peers, academics, and school, in general.

Cognitive engagement is described as a student's level of investment in the learning process and includes being thoughtful and a willingness to give effort in mastering difficult concepts and skills.

Engaging Students Through Cooperative Learning

Cavanagh (2011) conducted a study that documented student reactions to their enrollment in a course that routinely interspersed cooperative opportunities within weekly lectures. The 13-week course was a second-year mathematics course designed for future educators and was designed so that students experienced cooperative learning activities every ten to 15 minutes throughout a 50-minute lecture. All students were invited to complete a brief five question survey at the end of the semester. Of the 129 enrollees, 113 students returned usable questionnaires for researcher analysis. The questions probed students to reflect upon how the structure of the course helped them understand the content, and how the interplay of lecture and cooperative activities maintained their interest and attention. The researcher narrowed his focus by targeting the responses of the 94 students who had missed two or fewer of the 13 lectures.

Of the 94 respondents, 91 relayed that the structure of the lectures helped them learn the content of the unit. The three students who did not feel that the structure helped them learn attributed their lack of understanding to the amount of time spent performing the cooperative activities and that this time would have been better spent on the transmission of more content related to the teaching of mathematics. The remaining 91 students shared that the mix of lectures and cooperative activities helped them learn the content, most explaining that the cooperative work encouraged them to be active participants in the learning. Students enjoyed the time in class to formulate and express their thinking as they conversed with their peers. Students recognized and attributed their learning to being exposed to alternate views provided by their peers and explained that

these peer interactions caused them to listen closely as they learned multiple approaches to the content. Some students discussed their initial hesitance in participating in the cooperative activities, but as they continued to join in the conversations, they began to understand how these interactions helped them deepen their understanding.

Cavanagh (2011) noted that all respondents claimed that the lectures and cooperative activities helped them maintain interest to pay attention during the class sessions. The prevalent response that the interplay between lecture and activity allowed them time to independently think about the content, to discuss their thinking with those seated near them, and to then share with the whole class. Students reported that these structured conversations influenced how they prepared for class by looking ahead at the provided slides so that they would be better able to participate in the activities throughout the lecture. Furthermore, some students reported that the activities left them with something to think about during the following week.

Cavanagh (2011) concluded that students valued the active nature of the course through the embedded cooperative activities both as a means to improve their understanding of the content and as a way to maintain interest and attention during class sessions. The researcher contended that these findings are in alignment with previous studies on the ways in which cooperative learning activities support student understanding (Haworth & Conrad, 1997), how variance in lecture presentation helps maintain student vigilance, and that collaborative activities motivate students (McCarthy & Anderson, 2000). Cavanagh further admitted that the findings from this study are not aligned with those of van Dijk et al. (1999) and of Vreven and McFadden (2007). These sets of researchers found that interactive teaching did not automatically produce student engagement and that students did not benefit from cooperative learning activities during lecture sessions.

Cavanagh (2011) pointed out a few key differences between his study and those of the researchers with whom this study disagrees. First, this researcher emphasized that the participants in his study had a clear understanding of the delineation between the lecture portion and the cooperative activities within the class sessions and knew the purpose of each phase. Second, the researcher defended his work by stating that the ways that the cooperative activities were designed were inherently valuable to students because they were authentic strategies through which students found direct connections between the lecture and the activity.

In a separate study, Herrmann (2013) examined the extent to which cooperative learning increased student engagement in university tutorials and the perceptions of cooperative learning held by undergraduates. Participants in this study were undergraduate students enrolled in a political theory course at a Danish university. Throughout this course of study, students were required to supplement a weekly lecture with tutorials in which 20 to 25 students met to discuss worksheet questions they were to have answered in advance. Cooperative learning was introduced into the tutorial sessions of this program with the intent of increasing student engagement both within the tutorials and the weekly lectures. During each tutorial session students would be placed randomly into small groups to discuss their responses to the three of four worksheet questions. Each group was instructed by the tutor to prepare one of the three questions for discussion with the whole group. During whole group discussions, the non-presenting groups were asked to share their perspectives of the each of the questions. Lastly, all groups were directed to attack the fourth question, which required them to apply political theories on a particular case. Again, group work was followed by whole group discussion.

Two sets of data were collected for analysis of student engagement and perceptions of cooperative learning. The first measure was a participation scale

comprised of 19 items. Six of the 19 items on the scale were used to describe student in-class participation. Students completed a pre- and post- participation questionnaire, prior to the implementation of the cooperative learning activities and at the end of all sessions, respectively. Student perceptions of cooperative learning were measured using questionnaires that included open-ended questions to allow students to provide written responses describing their experiences with cooperative learning. A total of 142 participation surveys and a total of 135 perception questionnaires were analyzed by the researcher.

The researcher recognized the ambiguous nature of the term, student engagement, and used two constructs as definition for the purpose of this study. The first construct, approaches to learning, is viewed as a qualitative measure of student motives and strategies that produce quality student learning outcomes. Approaches to learning are further delineated into two separate sets of student attitudes and behaviors. The surface approach is characterized by minimal effort and a focus on rote learning of facts. The deep approach is defined by a desire to understand the meaning of course content and by personal interest on the part of the student.

Herrmann (2012) found that student in-class participation increased when cooperative learning was introduced into tutorials. However, no change was detected in student approaches to learning. Meaning, changing an instructional approach alone does not decrease a surface approach, or increase a deep approach to learning. Participant responses on the perception survey produces varied results. Some students found value in the more active opportunities, while others found the lack of direct instruction and correct answers frustrating. Herrmann interpreted these results as matching findings from earlier studies. For example, Kelly and Fetherston (2008) concluded that students who prefer a transmission style of teaching and learning do not find value in cooperative learning

structures. Herrmann relates this thinking to an assumption made by Johnson and Johnson (2009) that cooperative structures that promote positive interdependence automatically result in student engagement. This fault in this assumption is the belief that all students will respond to cooperative learning in the same way.

Herrmann (2012), therefore, provided the following implications regarding implementation of cooperative learning. He warned that teachers much understand that simply initiating cooperative learning will not automatically raise student engagement. Chosen tasks must not be too simple or too difficult. Herrmann suggested meaningful tasks such as discussing, applying and interpreting, rather than defining or explaining topics. The researcher also encouraged teachers to be cautious in the amount of help provided to students so that assistance does not develop into lecture. Finally, Herrmann stated that teachers must take the time to design tasks that are meaningful to students and that they need to invest in clearly explaining the purpose and intention of the cooperative activity.

Engaging Students through Randomizing Questioning

McDougall and Granby (1996) conducted a study that examined whether undergraduate students' expectation that they might be called upon in class, at random, influenced how well they prepared for the class, whether they recalled more information from their assigned readings, and how this expectation may increase confidence in reading recall as compared to students without this expectation. These researchers explained that college instructors have a tendency to require that students prepare for class by completing certain tasks, such as assigned readings, to increase participation during class. They listed several ways in which college instructors typically, or traditionally, communicate their expectations that students prepare well for classes. Some of these tactics include providing written directives in course syllabi, voluntary oral

questioning during class lectures and discussions, and having students experience the consequences of not completing assigned readings. The researchers also shared a number of non-traditional ways in which students were encouraged to prepare themselves to participate in class, such as, voluntary homework that included students writing test items over the content of assigned readings.

McDougall and Granby (1996) explained that, at times, the more traditional methodologies had negative effects. For example, allowing students to experience the consequences of unpreparedness often resulted in poor student participation in class, last minute cramming for examinations, and failure to master the learning intentions set within the course. Furthermore, the common practice of relying only on those students who were well prepared to participate in class resulted in lack of accountability for learning by the students who did not prepare or prepared poorly for class. Hence, the purpose of this study was to investigate the effects of a non-traditional instructional method, random oral questioning, of encouraging preparation for class.

These researchers provide a detailed explanation of how the utilization of oral random questioning and its effects on student participation in class are related to positive and negative reinforcement as described by behavioral psychology. Students who are well prepared for class are positively reinforced by answering questions correctly when called upon in class. Conversely, students who are ill prepared for class participation face negative reinforcement as they respond incorrectly when being called upon in class. The students who are positively reinforced, continue their routines of entering the classroom prepared to participate, while the negatively reinforced students change their pre-class behaviors so that they are better prepared to participate and are able to avoid the negative consequences that result from answering incorrectly in class. Over time, students who had faced negative reinforcement will seek out and receive positive reinforcement as they

better prepare for class and are able to respond correctly in class. Students who had previously received positive reinforcement are motivated to continue their behaviors. Hence, preparation for class on the part of all students continues. The instructor's behavior of randomly calling on students to respond to questions inherently creates a variable schedule of reinforcement, which increases the likelihood of all students entering class prepared to participate in the discussion.

McDougall and Granby (1996) used behavioral principles to explain how traditional methods of calling on volunteers to respond in class positively reinforces both students who come to class appropriately prepared to respond in class and those who do not. As explained earlier, when instructors use a traditional method of calling on volunteer responders, those students are positively reinforced for their preparation as they answer questions correctly in class. The students who do not volunteer to respond in class and are not called upon may be inadvertently reinforced for a lack of preparation. Therefore, students who are exposed to random oral questioning learn that they are accountable for class preparation for every meeting, while students who are subjected to traditional, volunteer questioning are accountable for learning less frequently, or not at all, until exams or some other measures of learning are provided.

In this study, McDougall and Granby (1996) tested the extent to which the expectation of random oral questioning might affect student preparation for class. Students in the class had not yet been exposed to this non-traditional method. Participants in this study included 40 undergraduate students enrolled in a statistics course. Midway through the semester, a portion of the students were told that during the following class meeting, the instructor would utilize random oral questioning to solicit student responses. These students were the experimental group. At the following class meeting, all students were given a 12-item survey that included a content related quiz and questions regarding

their class preparation for the week. Survey items were separated into two variables: reading recall, and completion of assigned reading.

Results of the study indicated that students in the experimental group correctly answered significantly more items on the seven-item quiz than did the students in the control group. Furthermore, students in the experimental group reported reading a significantly greater amount of the assigned pages than those in the control group. In response to questions regarding study habits, participants provided a variety of open-ended responses. Researchers categorized a number of these responses into four common themes which included being too busy or not having enough time, reading material was difficult, no differences in preparation habits, and wanting to be prepared due to random questioning.

McDougall and Granby (1996) concluded that expectation of randomized questioning affects student preparation for class. Students who expected to be randomly called upon in class demonstrated higher reading recall, completed more of the assigned reading and spent more time preparing for class than classmates. Furthermore, student expectation of randomization in questioning evidenced higher levels of confidence in their reading recall and their abilities to respond.

Dallimore, Hertenstein, and Platt (2006) examined a learning environment in which the instructor utilized graded participation and cold-calling as strategies to increase student participation in class and its effects on student preparation prior to class meetings, and participation and comfort levels in class discussions. Classroom discussion is reportedly one of the most frequently employed means through which instructors prompt student participation and has been described as an instructional strategy that benefits students by exposing them to multiple perspectives, increasing their self-awareness, and developing their critical understanding of the subject (Brookfield & Preskill, 1999). A

concern exists, however, about how to involve all students in classroom discourse, especially those students who are disinclined to participate because students who do not actively participate may experience lower quality learning. The researchers, therefore, stated that an instructor is faced with a decision involving the use of cold-calling in order to include students who are not voluntarily participating in the learning process.

Dallimore et al. (2006) described cold-calling as a strategy used by instructors to call on students whose hands are not raised. Further, they note a distinct lack of research regarding this technique. In order to address the absence of research regarding cold-calling students, the researchers queried four separate panels of experienced educators regarding their thoughts on both grading participation in class and on cold-calling students. Three of the panels concentrated their discussions on their concerns with the use of cold-calling as an instructional strategy. These experts reported that cold-calling may result in students feeling uncomfortable or humiliated in class which would result in a lessening of voluntary participation. The fourth panel focused its energies in discussing ways in which classroom discussions effectively ensure student preparation prior to class, reflect student mastery of intended learning targets, and ensure that all students are motivated to participate. The fourth panel of experts agreed that grading student participation would help ensure student preparation prior to class and would reflect student mastery; however, they did not suggest using cold-calling or graded participation to help ensure that students participated in class discussions.

Researchers decided to focus on the effects of cold-calling and graded participation on student comfort levels, student preparation prior to class, and frequency of student participation in class discussions. Participants in this study were masters level students enrolled in an accounting course. The study included anonymous pre- and post-surveys taken by the participants at the beginning and end of the enrolled term. The

instructor in this study had a reputation of heavily emphasizing class participation and, prior to the administration of the first survey, informed students of his expectations for participation and relayed to them that they would be expected to respond in class, even when their hands were not raised. The number of students participating in the pretest questionnaire, fifty-four, was reduced to twenty-seven respondents for the posttest. A number of students had forgotten their personal identification numbers which were used to connect pre- and posttest data for analysis purposes.

Results of this study indicated a positive and significant relationship between participation ratings prior to the class and levels of preparation at the end of the course. Class preparation was also positively related to overall satisfaction with class participation on the pretest. Regarding participation frequency, data indicated a positive and significant relationship between pretest scores describing familiarity with class discussion and participation frequency and posttest participation frequency. Conversely, pretest scores describing liking of class discussion was negatively and significantly associated with posttest participation frequency. Meaning, the less a student reported liking class discussion at the beginning of the study, the more likely they were to participate at the end of the study. Scores describing students who had reported liking class discussion in the beginning remained stable throughout the study. The significance of this finding is that it suggests that cold-calling and graded participation significantly influenced students who had reported not liking class discussions by motivating them to participate in those discussions. Finally, regarding student comfort levels in class participation, posttest scores related to preparation and participation frequencies were both positively and significantly related to student comfort in participation in class discussions. Therefore, the more a student prepared for class and the more a student

participated actively in class, the higher the level of comfort when responding in class discussions, as compared to other classes within these students' area of study.

In a more recent study, Dallimore, Hertenstein, and Platt (2012) examined the influences of using cold-calling students on their voluntary participation in class discussions and on student comfort levels while participating in discussions. Researchers established that student participation in class discussions is characterized by the actual number of students that participate in the class. Hence, the greater the number of students that participate in class, the higher the overall participation. Investigating the possible increase in student participation through the use of cold-calling drives the first two of six overall hypotheses of this study. The researchers hypothesized that cold-calling increases the percentage of students who voluntarily answer questions in class and that this percentage increases over time in classrooms with high levels of cold-calling but remains the same over time in classes with low cold-calling.

Researchers further characterize student participation in classroom discussion by the frequency with which a particular student participates in each class meeting. For example, participation is greater for students who participate multiple times as compared to those who participate once. In a previous study, these researchers found that in a high cold-calling environment, the frequency of student participation increases over time (Dallimore et al., 2006). For this study, these researchers further hypothesized that cold-calling increases the frequency of student voluntary participation and that this frequency will increase over time for students in high cold-calling environments but not for those in low cold-calling environments. Also, cold-calling will affect the frequency of both volunteer and cold-called participation. Dallimore et al. (2010) found that as student participation in class increased, student comfort in participation increased. Given this finding and the positive results of cold-calling on voluntary student participation over

time, researchers in this study establish a final hypothesis that students' comfort levels in participating in class will increase in high cold-calling learning environments but will not change in low cold-calling classrooms.

Participants in this study consisted of students enrolled in 16 sections of undergraduate level accounting. A comparison of the content and instructional practices of the course sections revealed common syllabi, course readings, lecture slides and final exams. In class discussions, lectures, small group problem solving, case analyses, and student presentations were also the same. Additionally, instructors were rated similarly on course evaluations. One notable difference in student experience was the instructor use of cold-calling during class discussions. Students completed two separate surveys and underwent two classroom observations. The initial survey served as a baseline of student attitudes and behaviors regarding class participation. The second survey was taken at the end of the course and captured information regarding participation frequency and student comfort while participating in the course. Classroom observers collected data regarding percentages of students who participated in class and participation frequency per student. Through analysis of classroom observations, learning environments were divided into high cold-calling and low cold-calling sections, by instructor.

Results of this study indicate that in the high cold-calling sections, the number of students who participated voluntarily was greater, and increased over time. More questions were asked and answered. Also, more students, overall, participated in the high cold-calling environments. Finally, student levels of comfort in participating increased in high cold-calling but stayed the same in low cold-calling environments.

Theoretical Framework

Collective teacher efficacy (CTE), the perceptions of teachers in a school that the faculty, acting as a whole, will influence student achievement, has its roots in Social

Cognitive Theory (SCT) (Bandura, 1986). This highly complex construct is grounded in efficacy beliefs and human, or individual, agency. According to SCT, the decisions made, and actions taken by individuals and organizations are driven by their efficacy beliefs. Human Agency describes the ways in which an individual exercises some level of control over what happens in life. Considered together, efficacy beliefs and human agency are the foundation of CTE (Goddard, Hoy, & Woolfolk Hoy, 2004).

Agency

Social cognitive theory establishes that human agency extends to collective agency because human agency exists within a social structure and is therefore influenced by those social structures. When a group possesses a common goal and works intentionally and collectively to achieve this goal, the group is exercising collective agency. Within a school setting this might be seen in ways that a faculty contributes as a whole to increase student achievement or college readiness. The tenacity that the organization holds in completing this goal is dependent upon the strength of efficacious and agentive beliefs and actions (Bandura, 1997).

Efficacy Beliefs

Within the bounds of SCT, Bandura (1986, 1997) presented four primary sources of efficacy: mastery experience, vicarious experience, social persuasion, and affective states. According to Goddard, Hoy, and Woolfolk Hoy (2004), each of these sources are specifically indicated for individual, or self-efficacy; however, they are all easily applied to collective efficacy. Mastery experiences are those in which people exhibit levels of success. For teachers, these successes are classroom achievements, such as executing a lesson or a unit plan in which students demonstrate high levels of learning. For an organization, such as a school, mastery experiences are those in which student learning is pervasive and results from intentional school wide efforts.

Vicarious experiences are ones in which a desired outcome or behavior is modeled and observed. For schools, identifying successful schools with similar student demographics and student needs can foster strong efficacious beliefs. Social persuasion supports collective efficacy in the form of determination and communication of school goals and initiatives by school leaders. These leaders further support CTE by providing effective and actionable feedback to teachers and teacher teams as they implement school-wide structures and strategies in support of student success. Bandura (1986) added that qualities of the persuader, such as trustworthiness, credibility, and expertise, influence how well these messages are received. Goddard, Hoy, and Woolfolk Hoy (2004) related that less is known about how much affective states influence collective efficacy of organizations and recommended that this be a topic in future research. However, these researchers suggested that organizations are affected by stress, just as individuals are. They provided recent poor (or successful) performance on state-mandated tests as being a catalyst of school mood. Highly efficacious organizations are more likely to be able to manage the stress that comes from poor performance; while, a less efficacious school may be more likely to repeat or perpetuate the sense of failure.

Simply put, individuals and organizations learn from interacting with and observing others. CTE springs directly from Bandura's earlier work involving efficacy. Agency and efficacy beliefs exist within a social context and each are extended to include collective agency and collective efficacy (Bandura, 1977). When applied to a school setting, CTE provides a systematic structure within which to study the behaviors of teachers and teacher teams as they work diligently toward success for all students.

Conclusion

The purpose of this study was to examine the influence of CTE on teacher beliefs and behaviors that result in engagement of all students and persistence with those who

struggle academically. This review of related literature has provided background and related research on collective teacher efficacy, formative assessment, and student engagement. Missing from the related literature is a description of which teacher classroom behaviors and beliefs stem from a sense of collective efficacy and promote student engagement while indicating a persistence with students who struggle. Chapter Three will present methodology of the study: overview of the research problem, operationalization of the theoretical constructs, research purpose and questions, research design, population and sample, instrumentation, data collection and analysis procedures, privacy and ethical considerations and the limitations of the study.

CHAPTER III: METHODOLOGY

The purpose of this study was to examine the influence of CTE on teacher beliefs and behaviors that result in engagement of all students and persistence with those who struggle academically. Teachers who hold a sense of collective efficacy tend to exhibit behaviors that create positive learning environments such as communication of high expectations, commitment to students and to the teaching profession, flexibility in trying new approaches to instruction, promotion of student autonomy through student-centered instruction, and exhibition of greater effort and persistence when working with students experiencing difficulty in learning (Donohoo, 2017; Donohoo, 2018; Hattie, 2017). The researcher examined teacher perceptions and behaviors in an effort to identify specific pedagogical actions related to high expectations and persistence with students who are struggling, academically. The researcher collected survey, interview, and observation data from a purposeful sample of high school teachers of grades 9-12 within a small suburban school district in southeast Texas. Survey data consisted of participant responses to the CTB scale, in which the researcher compiled three separate means for the 12-item CTB scale, the six-item *Instructional Strategies* subscale, and the six-item *Student Discipline* subscale. This study utilized only the means for the *Instructional Strategies* subscale. Data from interviews and observations of classroom lessons underwent an inductive coding process to identify emergent themes. This chapter presents an overview of the research problem, operational definitions of the theoretical constructs, the purpose of the research and the corresponding research questions, the research design, the population and sampling of the participants, instrumentation, how the data will be collected and analyzed, ethical considerations, and the limitations of the study.

Overview of the Research Problem

Collective teacher efficacy has been established as a positive influence on student learning. Specific characteristics that teachers with strong collective efficacy hold include greater effort and persistence, especially when students experience difficulty in learning, communication of high expectations, promotion of autonomy, and increased commitment (Donohoo, 2017; Hattie, 2012). Teacher behaviors that demonstrate these characteristics include planning for and enacting rigorous questions, holding all students responsible for thinking about and responding to teacher questions, persisting with students who struggle, and extending the learning of students who meet or surpass learning objectives (Donohoo, 2018). Transitioning from the national accountability system of *No Child Left Behind* (United States Department of Education, 2015) to the *Every Student Succeeds Act* (United States Department of Education, 2015) brings new challenges to states and local school districts. The focus has evolved from closing the gap between populations of learners to ensuring that all students succeed. With these changes, school administrators and teachers must employ research-based structures and strategies that promote teacher collaboration that results in collective efficacy, which, in turn, will result in actions that are proven to positively affect student success.

Operationalization of Theoretical Constructs

This study consists of one construct: collective teacher efficacy. Collective teacher efficacy (CTE) is defined as the perceptions of teachers in a school that efforts of the faculty, as a whole, will have a positive effect on students (Goddard, et al., 2000) and will be measured using the *Collective Teacher Beliefs* (CTB) scale.

Research Purpose and Questions

The purpose of this study was to examine the influence of CTE on teacher beliefs and behaviors that result in engagement of all students and persistence with those who struggle academically. The research questions for this study are as follows:

1. How does CTE influence teacher behaviors that promote all-student participation during instruction?
2. How does CTE influence how teachers react to students who are reluctant to participate during instruction?
3. How does CTE influence teacher behaviors that promote all-student learning during instruction?
4. How does CTE influence how teachers promote student autonomy during instruction?

Research Design

For this study, the researcher utilized a mixed methods case study design in which quantitative data served as an exploratory aspect of the research questions and qualitative data acted as an explanatory tool. The benefits of including the exploratory data are that this information allowed the researcher to identify the case unit of the study.

Furthermore, examining exploratory and explanatory data provided a more thorough and descriptive analysis of the results from each question (Creswell & Plano Clark, 2011). A purposeful sample of high school English, mathematics, science and social studies teachers in a small suburban school district in southeast Texas provided responses to the CTB scale. Furthermore, teachers were participated in observed classroom lessons, and engaged in individual teacher interviews (see Appendix B). The researcher utilized an inductive thematic coding process to analyze the qualitative data.

Population and Sample

The population of this study consisted of a small suburban school district in southeast Texas. This school district is comprised of 20 campuses (10 elementary schools, three middle schools, three intermediate schools, two high schools, and two alternative program campuses), employs 56 school administrators, and 1,100 teachers. The student population is approximately 12,000 (Texas Education Agency, 2019). Table 3.1 provides the teacher and student demographics of the participating school district for the 2017-2018 school year, according to the 2018 Texas Academic Performance Report (TAPR) (Texas Education Agency, 2019). The district demographics reveal that approximately 56% of students are Hispanic and approximately 33% are White, while approximately 15% of teachers are Hispanic and approximately 76% are White. Furthermore, approximately 54.0% of students are economically disadvantaged, approximately 13% are English Language Learners, and approximately 8% receive Special Education services.

Table 3.1

Teacher and Student Demographics of the District

	Teacher	Student
	(%)	(%)
1. Racial/Ethnic Distribution		
African American	7.0	7.0
Asian	0.2	2.0
American Indian	0.2	0.5
Hispanic	15.0	56.0
Pacific Islander	0.0	0.1
Two or More Races	2.0	2.0
White	75.0	33.0
2. Gender		
Male	21.0	
Female	79.0	
3. Years of Experience		
Beginning Teachers	7.0	-
1-5 Years of Experience	32.0	-
6-10 Years of Experience	19.0	-
11-20 Years of Experience	26.0	-
Over 20 Years of Experience	18.0	-
4. Economically Disadvantaged	-	54.0
5. English Language Learners	-	12.0
6. At Risk	-	55.0
7. Special Education	-	8.0
Teacher and Student Totals	1,100	12,000

A purposeful sample of high school teachers (9th – 12th grade) in the participating district were solicited to participate in this study. The selected high school is a comprehensive grade 9 – 12 school with faculty size of 76. The leadership team at this school consists of one principal, a dean of instruction, and four assistant principals. Table 3.2 presents teacher and student demographic data for the targeted school.

Table 3.2

Teacher and Student Demographics of the Participating High School

	Teacher (%)	Student (%)
1. Racial/Ethnic Distribution		
African American	11.0	11.0
Asian	0.0	0.2
American Indian	3.0	0.9
Hispanic	9.0	69.0
Pacific Islander	0.0	0.1
Two or More Races	2.0	2.0
White	72.0	16.0
2. Gender		
Male	42.0	
Female	58.0	
3. Years of Experience		
Beginning Teachers	4.0	-
1-5 Years of Experience	30.0	-
6-10 Years of Experience	19.0	-
11-20 Years of Experience	24.0	-
Over 20 Years of Experience	22.0	-
4. Economically Disadvantaged	-	66.0
5. English Language Learners	-	8.0
6. At Risk	-	62.0
7. Special Education	-	10.0
Teacher and Student Totals	79	1.000

The percentages of economically disadvantaged (approximately 66.0%), at risk (approximately 62.0%) and special education (approximately 10.0%) students at this high school are higher than the district percentages of economically disadvantaged (approximately 54.0%), at risk (approximately 55.0%), and special education (approximately 8.0%) students. This research focused on teacher behaviors that increase success for all students, including those who are most at risk of failure. This school was selected to participate based on the percentages of students within at-risk populations.

Participant Selection

High school (grades 9 – 12) teachers employed in a small school district in southeast Texas were solicited to participate in this case study. English, mathematics, science, and social studies teachers were sent an emailed cover letter requesting their participation in a survey, semi-structured interview and classroom observation. These participants were selected because they are teachers of courses that are held to state assessment accountability measures. In each of these courses, students are administered end-of-course exams and scores from these exams are incorporated into additional measures that result in school and district level accountability. Ratings are assigned to schools and districts that determine how well students are being served and may result in both federal and state sanctioned consequences for those found to not meet these accountability measures.

Instrumentation

Collective Teacher Beliefs (CTB) Scale

The *Collective Teacher Beliefs* (CTB) scale was used to measure collective teacher efficacy. This instrument was designed by Tschannen-Moran and Barr (2004) as an adaptation of the Teacher Sense of Efficacy Scale (TSES) measure (Tschannen-Moran & Woolfolk Hoy, 2001). The CTB consists of 12 total items divided into two subscales of six items each. Construct validity was established through factor analysis. The factor analysis of the 12 total items ranged from .79 to .58. When completed on the two subscales, the factor analysis on the *Collective Efficacy in Instructional Strategies* subscale ranged from .78 to .67 and analysis of the *Collective Efficacy in Student Discipline* subscale ranged from .78 to .64.

The CTB is a 12-item survey that includes questions such as, “How much can teachers in your school do to produce meaningful student learning?” and “How well can

adults in your school get students to follow the school rules?" A 9-point Likert scale, ranging from (1) *None at all* to (9) *A Great Deal* is used to measure teacher responses. An overall score for the 1- to 9-point scale was computed by taking a mean of all 12 items. The composite reliability is Cronbach's alpha = .97, for the *Instructional Strategies* subscale is Cronbach's alpha = .96, and for the *Student Discipline* subscale the Cronbach's alpha = .94.

Data Collection Procedures

The researcher obtained permission to conduct the study from the University of Houston-Clear Lake's (UHCL) Committee for the Protection of Human Subjects (CPHS) and the participating school district's Institutional Review Board (IRB) before collecting data. The following sections describe the data collection process.

Surveys

After permission was granted, the researcher solicited the names and email addresses of all English, math, science, and social studies teachers of the participating school from the school principal. These teachers received an email containing a survey cover letter and a link to the CTB requesting their participation in the study. Additionally, the researcher provided instructions and a timeline for completing the survey. All surveys were distributed and submitted through Google Forms, which automatically imported all responses into Google Sheets. These initial surveys included respondent names which were used to identify participants for the study.

Interviews

Teachers who completed the survey received an email requesting their involvement in semi-structured interviews and observations of classroom lessons. Each participant interview was scheduled at a mutually agreed upon time and lasted an average of 20 minutes. During interviews, teachers shared their perceptions of student learning

potential, and of interactions within team instructional planning. They also responded to questions regarding their own pedagogical beliefs and habits.

Observations

The researcher observed all eight participants during classroom instruction. During each observation, the researcher looked for strategies used by the teachers to engage students in the learning, ways in which teachers addressed the needs of struggling learners, and how teachers evaluated the progress and performance of each student. Classroom observations occurred at mutually agreed upon times within the boundaries of regular school hours and lasted 47 minutes each. Data collected from these observations consisted of field notes and audio recordings. The audio recordings were transcribed verbatim. All data were saved on the researcher's computer hard drive, Google Drive, and flash drive. All access to survey input, observation and interview data are password protected. The flash drive containing the stored data will be locked in a safe in a storage room and will remain there for five years before being destroyed.

Data Analysis

Teacher responses to the CTB scale were collected using a Google Form and were transferred for analysis into Google Sheets. Data were grouped into CTB scale scores, Instructional Strategies subscale scores, and Student Discipline subscale scores, and means were calculated for each category. Pseudonyms were then substituted for all participant identifying information. The researcher reviewed all survey data to ensure correct assignments of data to each participant. Transcripts from semi-structured interviews and observations of classroom lessons were reviewed and pseudonyms were substituted for all participant identifying information. Transcripts were inputted into NVivo for organization and analysis. To answer each of the four research questions, data from semi-structured interviews and observations of classroom lessons were analyzed

through a thematic analysis approach. Analyses from interview and observation data were then compared to participant mean scores on the CTB Instructional Strategies subscale to identify influences of CTE on teacher behaviors that promote all-student participation during instruction, on how teachers react to students who are reluctant to participate during instruction, on teacher behaviors that promote all-student learning during instruction, on how teachers react to students who are struggling to learn during instruction, and on how teachers promote student autonomy during instruction.

Table 3.3 provides a breakdown of each of the major themes and identified coding for this study. The findings were organized according to the themes that emerged regarding the influences of CTE on teacher behaviors connected to student participation, on teacher behaviors regarding student learning during instruction, and on teacher promotion of student autonomy in learning. Each theme was supported by evidence from the CTB scale, classroom observations, and individual interviews.

Table 3.3

Themes Developed from Classroom Observations and Individual Interviews

Theme	Sub-theme
Learning Intentions	Establishing and Sharing Learning Intentions
Engaging the Learners	Engaging Students Through Randomization Engaging Students as Resources for One Another
Engaging Reluctant Students	
Monitoring and Evaluating Student Progress and Performance	

Qualitative Validity

During the qualitative analysis process, the researcher reviewed teacher responses to interview questions and data gathered during classroom observations to identify

connections between teacher beliefs and behaviors and overarching themes discovered through the review of the literature on collective efficacy, formative assessment, and student engagement. Responses and classroom observation data were also studied across participants to identify common beliefs and behaviors related to the research. Validity was strengthened through the use of triangulation of individual teacher interview responses and observational data collected during classroom lessons. In order to increase validity, data obtained from the interviews and observations were compared and cross-checked by participants. The responses received from the interview and observation processes were subjected to member-checking through which teacher participants reviewed the preliminary results and transcripts in order to enhance the accuracy of the transcriptions as well as the researcher's interpretation of the data. Also, the interview questions and results were peer-reviewed by experienced educators including school and district level administrators to ensure the questions allowed the researcher to collect the data necessary to answer the research questions.

Privacy and Ethical Considerations

The researcher obtained permission to conduct the study from the university attended by the researcher UHCL's CPHS and the participating school district's IRB prior to collecting data. None of the names of the school district, schools, or teacher participants were mentioned in the study. A survey cover letter was included in the email sent with the link to the survey, ensuring that participants were aware that their participation is voluntary, and that their responses and identities will remain completely anonymous. In order to sort data, each teacher was given a participant number. All survey data were transferred from Google Sheets to an Excel workbook and then verified to ensure that it was transferred correctly.

The researcher used methods to protect confidentiality during the qualitative component of the study. Each participant was asked to complete and sign an informed consent form which clearly explains the risks and rewards of participation in the study (see Appendix A). The informed consent form further describes the methods used for the study and what the participants can expect should they choose to engage in the study. Participants were notified that their participation is completely voluntary, and that identities will remain confidential by using pseudonyms during reporting of the data. During the interview and observation processes, every attempt was made by the researcher to be as objective as possible. During the qualitative coding phase, the researcher continuously safeguarded against subjective interpretations as new themes emerged by continuously reflecting on her prior experiences that may have biased her towards certain interpretations of the data. Additionally, the researcher used an emergent coding process to ensure that data, rather than any prior assumptions, drove the analysis and interpretation. All data will be stored on the researcher's computer hard drive, Google drive, and a flash drive and each will be password protected. The computer will be kept in a secure location and the flash drive will be in a locked cabinet and kept for five years before being destroyed.

Limitations of the Study

The results of this study will be presented with limitations. First, generalizability to all teachers of high school English, math, science, and social studies will be limited due to the qualitative nature of the study. Data collection involved teacher responses to interview questions and the conclusions made from these comments are dependent upon the degrees of accuracy and honesty of participant responses. This study involved eight teachers. Second, because this study focuses on one small high school in a small school district, the culture of the district and school structure may differ from many other

districts and will also limit generalizability. Third, internal validity concerns may include differences in levels of teacher experience and professional development. This study concerns instructional strategies that teachers learn through job-embedded professional development and through experience in the classroom; therefore, teachers with more experience and professional development portfolios may produce results differently than those without.

Conclusion

This study examined the influence of CTE on teacher pedagogical actions that indicate high expectations and persistence with students who are struggling, academically. This chapter provided an overview of the research problem, operationalization of theoretical constructs, research purpose, questions, research design, population and sampling selection, instrumentation to be used, data collection procedures, data analysis, privacy and ethical considerations, and the research design limitations of the study. The qualitative data underwent an inductive coding process. The next chapter will present a detailed description of the demographic characteristics of the participants, followed by the findings for each of the research questions.

CHAPTER IV:

FINDINGS

Introduction

The purpose of this study was to examine the influence of CTE on teacher beliefs and behaviors that result in engagement of all students and persistence with those who struggle academically. This mixed methods study included teachers of English, mathematics, science and social studies located in southeast Texas who were selected through purposeful sampling. Data were collected utilizing the CTB scale, classroom observations and individual teacher interviews. Data from each participant were coded and analyzed to determine themes associated with the influences of CTE on pedagogical actions that ensure authentic learning opportunities for all students and meet the needs of students who are reluctant to engage in the learning process.

Data including teacher responses to the CTB scale, classroom observations, and individual teacher interviews from eight teachers of English, mathematics, science and social studies were collected and analyzed. The participants' years of experience ranged from less than one year to over twenty-five years of classroom instruction. The researcher omitted additional participant demographic information because inclusion would make these teachers identifiable. Each of the eight teachers participated in one classroom observation and one interview. This chapter presents the findings of this study. First, participant responses to the CTB scale are described, followed by a brief summary of teacher demographics, then an overview of the major themes of this study is presented, finally an in-depth explanation of the results by theme is given. This chapter concludes with a summary of the findings.

Table 4.1 illustrates how each participant responded to the *CTB Instructional Strategies* subscale. Teacher responses to each of the six items and their mean scores are

delineated in the table. The Likert scale utilized the following descriptors: 1) none at all; 3) very little; 5) some degree; 7) quite a bit; and 9) a great deal. Two teachers responded with a mean score greater than 8.00. Three teachers obtained a mean score between 7.00 and 7.99. Two teachers obtained a mean score between 6.00 and 6.99, and two teachers obtained a mean score between 5.00 and 5.99. These mean scores indicate that the participants in this study hold the belief that, collectively, teachers can affect student performance, at least, *to some degree*, with the majority of respondents believing that the teachers at the school can influence student performance *quite a bit*, with two teachers reaching scores approaching *a great deal*.

Table 4.1

Results from Teacher Collective Beliefs Instructional Strategies Subscale by Participant

CTB Item	A	B	C	D	E	G	H	I
How much can teachers in your school do to produce meaningful student learning?	9	7	6	7	7	7	7	9
How much can your school do to get students to believe they can do well in schoolwork?	9	4	9	6	6	8	7	8
How much can teachers in your school do to help students master complex content?	9	6	7	8	6	6	7	8
How much can teachers in your school do to promote deep understanding of academic concepts?	9	6	7	8	5	6	8	8
How much can teachers in your school do to help students think critically?	9	5	6	6	5	7	8	8
How much can your school do to foster student creativity?	8	7	7	5	4	7	7	8
Mean Score	8.83	5.83	7.00	6.67	5.50	6.83	7.33	8.17

Learning Intentions

This section describes how participants clarified learning objectives for themselves prior to planning instruction and then shared those objectives with students.

These actions are in alignment with beliefs and behaviors of teachers who hold a high sense of CTE in that knowing and communicating and reinforcing student learning intentions is a necessary step in conveying high expectations for learning, promotes student autonomy in learning, and allows for appropriate questioning and monitoring of student progress and performance. Having a clear understanding of what students should know and be able to do by the end of the unit of study is a critical step in preparing activities that engage students in a targeted learning process. Successful completion of this step allows teachers to plan and implement lessons in which they are able to recognize when students are moving toward mastery of the content and when they are not. Recognition of both of these student pathways during instruction increases a teacher's ability to address student needs while they are learning the content which results in higher motivation for student participation and learning. Furthermore, sharing learning targets with students is a critical first step in creating student autonomy. Providing students with a clear understanding of the learning that is expected of them allows for the creation of personal learning goals and for self-monitoring of their progression toward meeting those goals. This section includes data from the CTB scale, interviews, and classroom observations pertaining to clarification of learning intentions and communication of learning objectives to students.

Establishing and Sharing Learning Intentions

Typically, participants plan learning intentions based on the Texas Essential Knowledge and Skills (TEKS), as required by Texas Administration Code (Texas Education Agency, 2019). Specific units of study are decided upon based on district level curriculum guidelines and then daily or weekly goals are set within collaborative instructional planning meetings, by course. In general, participants in this study claimed that they share expectations for learning with students through posting them on

whiteboards or incorporating them into slide presentations and then reading them to or with the students at the beginning of the period. In some cases, teachers reported referring to the objectives throughout the class period, as well. Through the interview process, the researcher was able to determine that explicitly sharing learning objectives with students through written and verbal communication is a school-wide expectation, as is referring to the objectives and any progress made throughout the instructional period. Analysis of CTB Instructional Strategies subscale scores, interviews, and classroom observations indicated that, in general, the higher that a participant scored on the scale, the more likely they were to clearly and consistently communicate learning expectations to students at the beginning and throughout the lesson and the greater the incidence of supporting all students in meeting those goals. Also, the lower the participants scored on the CTB scale, the less likely they were to communicate learning intentions to students and the lower the incidence of supporting all students in meeting them. Among all participants, there was one inconsistency in which a low scale score aligned with clear communication of learning intentions that provided a highly structured system for students to understand the learning objectives and to self-evaluate their progress.

For example, Teacher I, whose mean score on the CTB scale was 8.17 and one of the highest of all of the participants, provided this information regarding sharing learning intentions with her English Language Learners:

My expectations for student learning for each day are posted on my white board and they can be found in the same place throughout the year, so my students know where to look for it. I refer to it at the start of class and throughout my classroom instruction I will refer to the learning expectation. Because I have English language learners, I do have them verbally read the learning objective or expectation for the day. (personal communication February 5, 2019)

Asking her students to read the objectives aloud, in this case, provided students with additional practice reading and speaking in English, and helped them gain an understanding of what they are expected to learn. This choral reading practice also gave the teacher an opportunity to quickly assess whether her students were familiar with the academic vocabulary embedded within the objective.

Teacher I explained the importance of holding her students to high standards when she stated:

Well, I have to hold them [English Language Learners] to the same expectation [as English speaking students] in the sense because being in the grade level that they're in, in the state we're in, and in the country we're in, I can't hold them to different expectation when the higher ups are saying, "no, they need to be here." So, I really don't think it'd be right for me to lower the bar. So, just giving them scaffolding and giving them accommodations, I know with that they can do what the General Ed population is doing. I'm not saying they'll get it at the same pace because a lot of lessons where maybe a General Ed teacher might only take a day or two on a certain lesson, I might have to spend more time on it because I am trying to support and help their English language grow. So, it's listening, speaking, reading, and writing. It's a lot. And it's tough whenever you know that they can do it in their native language. It's like a challenge and you've got to push them towards overcoming that challenge. I mean, it's a barrier and it doesn't have anything to do with their intelligence. (personal communication February 5, 2019)

This quote from Teacher I revealed her commitment to her English language learners in that she holds high expectations for their learning and scaffolds and accommodates instruction so that they are better able to meet those goals. Classroom observation data showed that the learning intentions for her students are the same ones provided for

students enrolled in regular English classes. On the day of the observation, students were tasked with the same writing prompt that was given to the regular English classes.

Teacher I's students, whose current English proficiencies varied, were expected to complete the assignment to the best of their abilities. None of the students completed the assignment within the boundaries of the class period, but each worked throughout the entire period with varying levels of assistance from the teacher.

Data from Teacher I's interview and classroom observation are in alignment and illustrate that a teacher with a high sense of collective efficacy may ensure that students understand the intentions for learning and holds high expectations for student performance. Teacher I shared specific goals with her students prior to the lesson and reminded them of those goals throughout the class period. She then provided levels of support appropriate to each student's needs in an effort to help them reach those goals.

Teacher C, who teaches social studies, also refers to the learning objective at the beginning and throughout the period. She described her practice as:

... we talk about it, "Okay, so this is what we're going to learn today." And then I try to like, reference back throughout the class period. But I don't always do that. But I do at least at the end try to say you know, "Okay, we should now be able to do this." And then sometimes there's like an exit ticket or something to see if they understand it. (personal communication February 4, 2019)

Teacher C's explanation indicated that she may know the importance of ensuring that students are aware of what they are supposed to learn by relaying that she tries to remember to restate the objective throughout the period, but that she does not always do so. This lack of consistency could be due to the practice being a new one, relative to stating the objective at the beginning of the period and, occasionally, requiring students to complete exit tickets as they leave the classroom. In this case, exit tickets are typically

questions that students are tasked with answering at the end of a class period. Students may be asked to respond to specific questions regarding the targeted content, or they may be asked to self-evaluate how well they've learned the material.

Teacher C's observation data showed that she reviewed the learning objective at the beginning of the period by telling the students that they should be able to identify the causes of prosperity in the 1950's. She then directed students to the board where she had written the H.O.T.S. for the lesson and instructed them to write the question in their notes. H.O.T.S. is an acronym for higher order thinking skills. According to comments made in her interview, Teacher C included these questions in her lessons on a daily basis. She and the other teachers on her team created these questions within their instructional planning meetings. The questions for the day of the observation were, "How will life in America change in the 1950s? Compare life in the 1950s to life in previous eras." She explained to students that they should be able to answer those questions by the end of the period. Communicating the learning intentions to students and having them write the questions for the day within their notes provided students with a strong sense of what they are to learn and be able to do by the end of the lesson and promotes student autonomy. However, at the end of the period, students were not prompted to respond to these questions. It appeared that the class period ended before the formal conclusion of the lesson, rather than the lesson ending without a planned closure. The notes page provided to the students at the beginning of the period included a section for students to write a summary of what they learned; therefore, this lack of closure may have been more of a lack of awareness of the time, rather than an omission of that critical check for understanding on the part of the teacher.

Teacher C's mean score on the CTB Instructional Strategies subscale was 7.00, which is roughly in the middle of all participants' scores and indicates that she believes

that faculty have the ability to affect student success *quite a bit*. Interview and observation data are in alignment with Teacher C's moderately high mean on the instrument and illustrate that a teacher with this level of collective efficacy will plan and implement a structure for communicating learning intentions and will plan a way for students to either perform a self-assessment of their own learning, or will check for understanding. Teacher C also showed behaviors that indicate a high level of dedication in engaging students in the learning process and providing feedback on student progress throughout the lesson. These behaviors are explained in the subsequent sections of this chapter.

Teacher D, who teaches social studies, also revealed that she has the student learning objective displayed on her board, and that she struggles to remember to reference it during instruction. Teacher D stated:

So, to set basic expectations when they come in, on the screen, I have what you'll need for today, a rundown of what we are doing, if it's something out of the ordinary, and then I have my objective written on the board. And I am trying to get better about specifically referencing the objective to the class, but at the beginning of every class, I give a rundown of what we are doing that day; if it fits in with what we did yesterday, that kind of stuff. (personal communication February 6, 2019)

This response illustrated that Teacher D is consistent with sharing an agenda of materials needed and planned activities with students but is not in the habit of communicating expectations for learning. This quote may indicate an assumption on the part of the teacher that her students will be able to infer the learning objective through their participation in the lesson. This type of communication may not promote a clear

understanding of the learning intentions in the way it would if she also included content objectives in her daily introduction.

Observation data regarding Teacher D's lesson revealed that she did not review the learning intentions for the day at the beginning of the period, or at any other time throughout the lesson. She did, however, close the lesson by directing students to provide written responses to a number of questions. In answering the questions, the students were required to identify what the political cartoons had in common, make an inference regarding the meaning of the illustrations, and explain why reconstruction was successful and why it was a failure. These questions were in direct alignment with the current lesson.

Teacher D's mean score on the CTB scale was 6.67, which was roughly in the middle of all participants' scores and slightly lower than that of Teacher C. Interview and observation data were in alignment with each other but did not fully support this teacher's responses on the instrument. These findings did not reveal consistent teacher actions that describe the behaviors of a teacher with a moderate sense of collective efficacy in regard to communicating learning intentions with students. Teacher D does not routinely share learning objectives with students, which leaves them with a lack of direction during the lesson. Furthermore, without knowing where they are going in the lesson, students are unable to design and monitor their own learning goals and are less likely to strengthen their autonomy in learning in this course.

Teacher H described an approach similar to Teacher D's approach by which she shares a weekly agenda of events with students and will share the learning objective with students, daily.

Typically, on Monday, I will take a few minutes to overview our whole week, because if I don't tell them, "Hey, we have a test on Thursday," when it comes to

Thursday, they are like, "What? You didn't tell me I had a test." So, on Monday I give them a quick overview, "Hey, this is going on this week. We have this, we have this," and then every single day after the warmup I go through what they should take from today. So, by the end of today, you should have practiced writing systems of equations from word problems. So, they know. "By the end of the day I should know how to do this." (personal communication February 7, 2019)

Teacher H's response indicated that she recognizes that students need to be informed of what they should learn on a daily basis so that they are able to self-evaluate their progress at the end of each class period. She also shares with students an overview of the week, including major events such as upcoming exams. This allows students the potential to make short term goals in addition to daily learning objectives.

Analysis of classroom observation data revealed that Teacher H provided a highly detailed explanation of the learning objective that included the actual objective, how the new learning about the topic related to what they learned in previous lessons, an explanation of the difficulty of the task, the activities that the students were to complete, and how the content would be tested on the state exam. This overview not only gave the students a plan for learning for the day, but also informed them of how their learning would be assessed. Teacher H had also written the learning objective in a designated location on the whiteboard. Teacher H's mean score on the CTB scale was 7.33, which was the third highest score of all participants. This score is in alignment with interview and observation data and illustrates that a teacher with a high sense of collective efficacy may provide students with a clear roadmap for learning and assessment goals, which allows students to set their own learning goals and monitor their own progress toward those goals, thereby, promoting student autonomy

Teacher A indicated that she includes behavioral expectations in addition to academic objectives at the beginning of each class period. She shared that she and her students created a social contract at the beginning of the school year. This activity involved the class, as a whole, determining which behaviors should be expected of them and of the teacher that would enable them to learn most effectively. Teacher A also explained how she communicated and monitored expectations for learning each day:

As for our social contracts that we did at the beginning of the year, they know that that's [following the social contract is] expected of them every day. Sometimes I'll remind them at the beginning of class. "Hey, put your phones up. Take your earbuds out." Those are the two big ones that I have an issue with. I don't know that we're ever going to get away from that, although I pray that we do. Then just a reminder every day for the expectations. And then whenever they have an assignment, I try to tell them everything that needs to be done. I try to type it up, because I've noticed whenever I don't put it on the board for them to read, they're not listening, I don't think. So, then I have a thousand kids asking the same question. So, I'm like, "Do you all have any questions before we get started?" Then I walk at the beginning to make sure everybody knows what they're doing. "Do you know what you're supposed to be doing?" Group wise, whatever. And then ... I don't know that I'm that good at that, actually. What I've done in the past is write one for the unit. I've done it where we write them weekly. I tell them, "By the end of the day, y'all need to be able to know primary consumers, tertiary, secondary..." That kind of stuff. (personal communication February 4, 2019)

Teacher A described how she provides both verbal and written directions pertaining to learning goals and then monitors student behaviors by walking around the room and observing students as they work. She also explained how she plans for unit and weekly

goals within collaborative instructional planning meetings. Teacher A hesitated as she reflected upon how she shares and goals for learning with the students. She revealed an insecurity that may indicate that this behavior is not routine for her, or that she would like to be stronger or more consistent in implementing this strategy. Like Teachers C and D, Teacher A may not have a depth of understanding of the benefits of sharing learning objectives with students or may not hold the belief that sharing these objectives is the first critical step toward creating student autonomy in learning.

Upon arrival in Teacher A's classroom, the researcher noticed that the learning objective was written on the board and was projected on a display screen located at the front of the room. When class began, the teacher reviewed the objective for the day and provided a detailed explanation of what learning was expected of the students during the planned activity and how they would demonstrate their understanding at the culmination of the task. Teacher A also told students that they would be called upon throughout the period to respond to a variety of questions. Prior to students beginning their assignment, the teacher numbered collaborative groups and then instructed students to number themselves one through four within each group. Groups with less than four members were to ensure that each number was assigned so that some students took on multiple numbers. While students were working throughout the period, Teacher A used a variety of methods in calling students to explain their thinking. In some cases, she randomly called a table number, then a student number, and in others she asked students to call table and student numbers.

Teacher A's mean score on the CTB scale was 8.83, the highest of all participants. Interview data illustrated a clarity of content to be taught to students, but showed a potential insecurity pertaining to sharing that information with students on a consistent basis. Observation data, however, revealed a strength in communicating

learning intentions with students and explaining to students how their new learning would be assessed at the end of the period. Data from the CTB scale and from classroom observation illustrate that a teacher with a high sense of collective efficacy will effectively communicate objectives for learning and will project expectations for evaluation of student learning to students at the beginning of the lesson.

Teacher G explained that she shares learning objectives with students so that they will know what knowledge or understanding that they need to gain during the day's lesson. She also shared her thoughts on holding different sets of expectations for students:

We set the learning objectives based on the readiness standards from the TEKS, their essential outcomes. Realistically for each class period and even each kid you're going to have sort of different expectations or goals for them when they leave the classroom. There are some kids who I try to get them extended a little bit more, but there are some kids who I just want them to leave having made two new inferences from a text that they would've blown past. We try to set the objectives for learning from the TEKS, but then further into that there are different levels of kids. So, you have to have slightly different expectations based on the kids that you know. I share the objectives with them. There have been a few days where I've forgotten, but usually I point to it. I share it with them after the warmup so that we can get going into it. They usually know exactly what they need to be leaving with or what we're going to be focusing on. So, if we're talking about context clues, but we're reading a text I'll say, "We're going to read a text and look at certain words for context clues." So that's how they know. (personal communication February 5, 2019)

This statement from Teacher G illustrated that she understands and values the importance of communicating learning objectives with students in such a way that they will

understand what they need to know and be able to do by the end of the lesson. She claimed that she forgets to share this information with students, at times, but that her common practice is to point to the objective written on the board and to then explain what the students need to focus on for the day. Teacher G further explained that she expects students to accomplish different levels of mastery for these objectives. Her response indicated that she believes that some students should be able to stretch beyond the stated objective, while others should meet minimal expectations. Her description shows an interest in meeting all students where they are in their own learning and helping them move forward in their mastery of the concept. Her statement may also indicate that she may not hold high learning expectations for all students. There is evidence that supports this interpretation of Teacher G's statement that will be noted and explained in a later section.

In the classroom, Teacher G set the intentions for learning by first asking students to write a short response to a quote. After students had time to write and share their writing with a partner, Teacher G explained to students that they would be reading a story about revenge. At the beginning of the lesson, the teacher asked a student to read the introduction to the story. After this, she explained that they would continue the reading and would be looking for context clues to help them understand what was going on in the story because the writer used a lot of elaborate language. Teacher G's mean score on the CTB scale was 6.83, which is roughly in the middle of all of the participants' scores on the instrument. Interview and observation data are in alignment with this score and illustrate that a teacher with a moderate sense of collective efficacy will communicate learning objectives with students so that they will have an understanding of what they are to gain during a lesson.

Of all the participants, Teacher B offered the most structured and detailed response regarding sharing objectives for learning. She claimed that when she shares learning goals with students, she first analyzes the goals and defines the specific targets for the day. She, further, creates and shares essential questions that she will introduce to students. Then, she formulates *I can* statements for the students to use for self-evaluation at the beginning of the lesson. Teacher B stated:

Well, I always have in mind what TEKS we are going to be addressing and we divide those up sometimes because sometimes the TEKS that is given to us by the state are way too complex for one day and I don't even want to read that to the kids, because it's going to be too many ideas. So, I have that set up in advance, I know which part I'm going to be addressing. I have it on the board for them so that they can see it that I will...For example today, we are working with quadratic equations and so we are working with specifically the vocabulary and so I have that set up on the board, and then I generally always read it to them at the beginning. I say, so yesterday we did blank and today we're going to do this. And I also usually give them what are central questions are because they're essential questions are designed around that, to help them understand...to me the essential question helps them understand what the objective is saying. So, what is it, what's the important part of this objective? So that's how I communicate it to them because I, I read it to them, and we talk about what is this and so this is what we're going to do today. And if there's any part of the expectation that might be an issue vocabulary wise or something, I explained to them at that point what that means, so that they have some idea. But we also are providing them with a set of 'I can' statements for every new unit. So, when we give them those, I asked them to look at those I can statements and to determine which of these things can they

do because some of them are foundational skills. (personal communication
February 6, 2019)

The statement given by Teacher B addressed multiple critical features of sharing learning objectives with students in order to promote student autonomy. Teacher B began her explanation by stating that the first action she takes is analyzing the standard in order to determine the specific learning targets for the unit of study. These learning targets are further broken down into foundational knowledge and current or new learning goals, which are then converted into *I can* statements for student use in evaluating their current levels of mastery regarding the topic of study. Additionally, Teacher B determines which terms she will introduce at the beginning of the lesson and what questions the students will be able to answer at the end of the lesson.

Teacher B explained that she shares learning objectives with students at the beginning of the period by first reading the objective aloud to the students and then defining vocabulary words that she believes might cause students to not understand the goal. She follows this with briefly explaining how the current lesson is connected to the previous lesson. Teacher B claimed that she then asks students to reflect upon their current mastery by completing a brief self-evaluation. Students are provided with a number of “I can” statements, such as “I can factor a binomial”, and are asked to choose their status by checking one of three boxes. The boxes are labeled: *I can*, *Sort of*, and *Not yet*. Once students have completed this task, Teacher B begins the lesson.

These behaviors indicate that Teacher B has a clear understanding of the importance of communicating learning objectives so that students understand what they should know and be able to do by the end of the lesson. She also knows that students benefit from knowing how the current lesson connects with previous learning and from evaluating their own prior learning. An observation of one of Teacher B’s lessons

verified each of the behaviors she spoke about in interview. At the beginning of the class, Teacher B addressed the class by discussing their performance, as a class, on a recent district benchmark. Students then completed a couple of problems for a warm-up. Directly after the warm-up, Teacher B introduced the lesson by reviewing the objectives for learning. She defined the academic vocabulary and then had students independently review and rate themselves on the *I can* statements for the unit of study. The *I can* statements were typed on a slip of paper that students picked up as they entered the classroom. These papers were then adhered to individual student notebooks for access throughout the unit of study timeline.

Teacher B's mean score on the CTB scale was 5.83, one of the lowest of all participants. While her interview and observation data were tightly aligned, the low sense of collective efficacy does not match Teacher B's dedication to clarifying objectives with students and then having students self-evaluate their current mastery status pertaining to skills leading up to and including those for the new learning. Teacher B's practices involving sharing and reinforcing learning objectives with students may be due to her extensive experiences in the classroom in professional development. Teacher B advocates a standards-based learning system that starts with a deep analysis of learning objectives and checkpoints that define student mastery of those objectives. One facet of this process involves student tracking of their own progress, which may explain her dedication to defining learning intentions for students and ensuring that students know what they will know and be able to do at the end of each lesson.

Overall, participants' CTB Instructional Strategies subscale score matches data collected in interviews and classroom observations regarding sharing learning intentions with students. This type of communication informs all students of what they are expected to learn within the lesson, which, in turn, promotes student autonomy by providing them

with opportunities to set and evaluate personal learning goals. Furthermore, this strategy gives students purpose and motivates them to engage in the learning process. For example, the higher scale scores of Teachers A (8.83), I (8.17), H (7.33), and C (7.00) are consistent with their intentions and implementations of sharing specific daily learning goals and how those goals will be monitored and assessed within the lesson. These teachers have high levels of CTE which should result in high expectations for all student learning and an interest in promoting student autonomy.

These behaviors can be contrasted with those of Teachers G and D. Teacher D's CTB Instructional Strategies subscale was 6.67. Although, her score is only slightly lower than that of Teacher G (6.83), Teacher D's lack of setting and sharing clear learning intentions for students indicates that the lower a teacher scores on the scale, the less likely she will be to provide students with critical information that promotes autonomy by allowing them to set and monitor learning goals at the beginning of each lesson. Teacher G, while routinely sharing learning intentions with students at the beginning of a lesson clearly states that she holds different levels of expectations for students based on their perceived abilities. While differentiation of instruction according to students' needs is critical for learning, it is the instruction that should be differentiated and not the expectations for learning. This is illustrated in a comparison between how Teacher G and Teacher I describe their expectations for student learning. Teacher I also explained that her students will have difficulties in reaching the goals she sets for them. She further mentions that she assists them in meeting these goals by scaffolding information and accommodating their instruction to meet their various levels of language proficiency. These opposing descriptions indicate that Teacher I, who has a higher score on the CTB subscale and believes that her students can learn at high levels, will adjust her instruction in order to help make this learning a reality for her students. However,

Teacher G will accept minimal answers from some students while helping others extend their learning, indicating a lack of belief that all students can learn at high levels.

The one apparent mismatch between CTB Instructional Strategies subscale and analysis of interview and observation data occurs in Teacher B's case. Teacher B, who has one of the lowest scale scores of 5.83, utilizes the strongest method of clearly communicating learning intentions and having students set and monitor their own goals for learning. Students in her class participate in a highly structured routine of receiving the learning objective from the teacher, along with a deep discussion of the connections between this objective and past learning and clarification of new terms. They are then required to make an evaluation of where they are in their current understanding and abilities regarding foundational knowledge and skills that support the new content, as well as evaluate where they are within the new learning. Teacher B's CTB subscale would more likely describe a teacher who did not have an interest or routine that communicated learning intentions with students and promote autonomy in such a strong manner.

Engaging the Learners

This section includes strategies that participants in this study engage students in learning during instruction. Student engagement involves ways in which teachers invite all students to participate in learning events, how they encourage students to be resources for one another, how they provide feedback that moves the learners forward, and how they promote students to own their learning. These actions are in alignment with CTE in that ensuring that all students participate in learning involves high levels of student engagement and reveals persistence with students who struggle, academically. Woven into this system of engagement are ways in which participants support all students, especially struggling students, by providing structures and supports that ensured

successful participation in learning. Struggling students, in this study, are defined as any student who has obstacles in being successful within the parameters of one class period. This section includes data from the CTB scale, interviews, and classroom observations pertaining the various strategies participants utilized to engage students in the learning process.

Analysis of the CTB scale, interview and observation data revealed that participants in this study utilized questioning strategies, such as randomizing when calling on students to respond during classroom discussions and providing classroom environments and collaborative structures through which students acted as learning resources for one another. Results indicated that, while participants utilized multiple similar strategies, a distinct difference between beliefs and behaviors exists for teachers depending on whether their scores on the CTB scale placed them in the upper half or lower half of all scores. Teachers whose scores fell within the upper range were more consistent with their use of randomization as a means of engaging all learners and believed that use of this technique motivated reluctant students to successfully participate in the learning events. These teachers also created collaborative learning environments for their students and then used structures that ensured engagement of all students. Participants whose scores fell into the lower range on the TCB scale also utilized randomization when calling on students. However, their attitudes toward reluctant students revealed that this strategy was a consequence of non-compliance. Also, fewer teachers on this end of the scale utilized effective strategies for student collaboration and did not provide structures that ensured successful engagement and learning.

Engaging Students Through Randomization

When asked to discuss strategies employed to ensure that all students participate in learning, every participant indicated the use of some sort of randomizing tool when

calling upon students to respond during class discussions. Respondents shared the use of this strategy to promote accountability among all students, and to provide a classroom structure that discourages students from calling out in class.

Teacher D shared that she uses a variety of methods to call upon students during classroom discussion, including non-volunteer and volunteer methods:

So, I usually do "raise your hand if you want to answer," Popsicle sticks, and then just me randomly calling on people. So, I'll usually start with "Who can answer this just on their own?" And then if I'm not getting good participation from that, or I'm just getting one person answering, then I'll go to the Popsicle sticks and sometimes if I want to get someone engaged, I'll call on them specifically to answer questions. I think the randomization of using the Popsicle sticks makes it a little more "you have to be paying attention because you don't know if you're going to be called on." So, I'll do that if I know, or if I want to make sure that every single student's participating. (personal communication February 6, 2019)

This teacher described how she informally measures student engagement and decides upon which strategy to use during classroom discussions. Furthermore, she is able to recognize the differing levels of engagement, depending on the strategies that she uses. When whole class participation wanes, Teacher D initiates the use of randomization to ensure that all students are participating during classroom discussions. In order to randomly call on students in class, this teacher has sets of Popsicle sticks labeled with students' names. The teacher pulls a student name/Popsicle stick from the cup, resulting in a random selection of participants each time the teacher wishes to call upon a single student.

Observation data are aligned with the claims made by Teacher D during her interview. Teacher D utilized volunteer and non-volunteer questioning strategies to

engage her students during the lesson. Most of her requests for student responses were global in nature, meaning the teacher would ask the whole class to make an inference based upon a political illustration and would then call upon students who raised their hands to respond. Occasionally, Teacher D would call upon students to respond by drawing craft sticks. Teacher D did not replace the sticks once used, indicating to the class that once a student's name was called, that student would not be called upon until the teacher replaced all of the used sticks. Apparently, she used the randomization method to include students who were not involved in the classroom discussion through global questioning, alone. After calling three to four names, the teacher returned to global questioning. This pattern of volunteer student responses followed by randomization of calling upon students was repeated once within the lesson.

Teacher D's reliance on volunteer questioning and minimal use of randomized questioning as strategies for student engagement illustrate a moderate motivation toward all-student participation. The use of volunteer questioning potentially promotes those students most interested in the lesson and feel that they will be successful in answering questions. This method may largely ignore the students who are less confident that they will be able to respond to teacher questioning correctly. The use of randomization may hold all students accountable for sharing their understanding of the content. Teacher D's claim that she usually begins questioning by opening up the discussion to whoever "can answer just on their own" combined with an analysis of observation and interview data align with her moderate rating on the CTB scale. Teacher D scored 6.67 on the Instructional Strategies subscale of the instrument, which falls in the lower-middle of all participant scores. Her particular style of questioning indicates that a teacher who holds a moderate sense of collective efficacy may be likely to practice an inconsistent use of questioning that includes all students responsible for learning.

Teacher A notices differences in the ways in which students participate in class when randomization is utilized, as well. Teacher A reported:

Normally what I've always done in the past is just let whoever answer, and then when that person answers too much, I would have other people answer. But I have used the randomizing ... probably three or four times now. I've noticed that it is different. They're all like this (*sitting up with anticipation*), because they know that they're about to get called on. I don't put it off to the side. I put it back in the stack, because I'm guilty at the faculty meetings. If I've been called and I know it goes over here (*motioning to the side*), I'm doodling an astronaut or whatever.

What I have done in the past is just let whoever answer and then, "Okay, Bob."

Bobby is always the one that answers. "Okay, Bobby. Now somebody over here.

Okay. Now somebody over here." (personal communication February 4, 2019)

Teacher A's description of her use of randomization to call on students in class revealed her impressions on why using this method increases student engagement over other non-volunteer and volunteer methods. In this case, randomization appears to increase student anticipation of being called upon in class, which then raises their engagement.

Furthermore, randomization appears to decrease instances in which certain students command classroom time and attention. Finally, replacing a randomizing tool after use, rather than excluding it from further use, indicates that all students are eligible to be called upon multiple times within one class period. Therefore, they continue participating rather than becoming disengaged because they have already been called upon. Teacher A also disclosed that she understands the student experience based on her own experience when randomization techniques are used in school faculty meetings. In her interview, she indicated that she pays attention in the meetings, rather than doodling, because she knows she may be called upon to respond to a question or to share information with her peers.

Teacher A's classroom observation revealed a light use of randomization when calling upon students to respond in whole class discussion. This was possibly due to the nature of the predominant activity planned for the lesson. Students worked in small groups to complete a task which resulted in a lesson that involved very brief amounts of whole class discussion. Teacher A's mean score on the CTB scale was 8.83, the highest of all participants. This score was in alignment with data gathered through the interview process and through observation of her classroom. This suggests that a teacher who reports a high sense of collective efficacy will plan and implement lessons that involve all students.

Teacher C also replaces Popsicle sticks after each use to encourage student participation. She feels that students in her class are:

...more prompted to participate because they know that they're probably going to get called on. And it always happens, like sometimes a kid gets called on like five times in one class period. So, they have to think about an answer because they're going to be called on. (personal communication February 4, 2019)

Teacher C also explained that she uses randomization as a way to include students she considers reluctant learners. She began this response sheepishly when she explained, "I know this sounds bad, but I'll call on them [reluctant students] on purpose. Even though I pull a Popsicle stick that has someone else's name, because they don't know the difference" and then justified her response by indicating her desire to "make them want to find an answer" (personal communication February 4, 2019).

When Teacher I described how she ensured participation of all students, she stated that she will:

Randomize or use Popsicle sticks, or I'll just call a student who I see might not be understanding, just by their facial expressions, or one that I can see that they are

not as engaged as I would like them to be, so I'll just call their names directly to get their attention. (personal communication February 4, 2019)

Observation data revealed that Teacher C utilized randomization when calling upon students to respond in class over any other method of questioning. Throughout the lesson, Teacher C carried with her a plastic cup containing a set of Popsicle sticks that had students' names written on them. She used these to randomly call upon students to answer initial questions and would use them again to call on students for follow-up questions or to elaborate. At one point in the lesson, Teacher C hesitated prior to choosing and then appeared to relax when she read the name of the student who was to respond to the next question. When asked later about her hesitation, the teacher explained that the question was a sensitive one and she hoped to call upon someone who would be able to respond in such a way that did not distract students away from the intended discussion. The question was about changes in women's lives since the end of World War II. In her experience, responses to this question could sometimes result in discussion that detracted from the lesson. Having an appropriate response to this question was important to the teacher.

The importance of this behavior is that it appeared that Teacher C was willing to randomize a sensitive question in order to maintain the structure that she sets forth in her classroom, rather than choose a student who she felt would provide the most appropriate answer. This behavior strengthened her claim that all students are expected to be ready to respond and possibly indicates a level of confidence that she will be able to keep the class on track if a student provides an inappropriate response. Teacher C's CTB *Instructional Strategies* scale score of 7.50 falls within the upper half of the scores of all participants. Her determination in engaging all students in classroom discussion reflects her belief that

all students must be involved in the learning process and is aligned with her score on the scale.

Teacher H reported the use of index cards with student names to randomly call upon students in class. She stated, "I think it does help their learning and participation, because they can't check out. They can't go to sleep. They can't say, "I'm not going to answer" (personal communication February 7, 2019). Teacher H teaches mathematics to students who typically struggle in learning the subject. She explained that her goal is to find a balance between volunteer and non-volunteer questioning where non-volunteer, specifically randomization, is the prevalent method because, she stated, "I do have a couple kids that typically know the answer right away. They will try to take over the class and the other kids will be like, "Okay, well, I don't have to [answer]."

The researcher observed Teacher H utilizing index cards as a method to randomly call upon students to answer questions as she modeled how to solve problems involving systems of equations. During this lesson, the teacher did not replace index cards as she used them. Her small class size allows to run through the set of cards within one class period. In this way, all students are called upon to answer at least one time every day. Teacher H's mean score on the CTB scale was 7.33 which was the third highest of all participants. Her use of randomization when calling upon students ensured that all learners were accountable for learning throughout the lesson. Teacher H's interview, observation, and CTB scale data are in alignment, which indicates that a teacher with a moderately high sense of collective efficacy will use questioning strategies that include all students in the learning process.

Teacher B employs index cards that contain information in addition to student names. Teacher B shared:

I have their names on index cards along with what their goal is for this semester because I had them write their goal there, so that I can look at their goal every time I pulled their card. It [Reviewing student goals] kind of helps me think, what does this kid need out of this class? (personal communication February 6, 2019)

Having student personal information readily available allows Teacher B to include or address student interest and goals into classroom questioning and discussion. This teacher believes that incorporating this type of information adds to student participation and engagement because students are able to make better connections with the content and because their teacher has implicitly indicated an interest in them as individuals.

Teacher B also reported calling on students who she observes as non-participatory. When asked how she ensures that all students participate in the learning process, Teacher B stated:

Specifically, I tend to target those who don't appear to be participating, but they all know that they can all do board work and sometimes they volunteer and so if they want to volunteer, I let them, but I do try to target like, you know, one sitting back there and during the period he isn't doing anything. So he's going to answer the next question and he thinks I pull his card, but he, you know, because that's one of the things. The beauty of that random is, it's not always random, they don't know the difference. If I see that there's a need, then I'm, "Hey, I pulled so and so's card." (personal communication February 6, 2019)

Teacher G discussed how she prompts reluctant students to participate in class through this response:

There are times when I ask a person a question to put them in the hot seat a little bit because I know that they've had a pattern of not doing what they're supposed to do. I think just reminding kids like, "Okay, you are here to do something, and

I'm entitled to call on you if I want to." But usually I have my Popsicle sticks. And sometimes I even had a kid next to me if they're being especially problematic, they'll pull the Popsicle sticks for me. I think that it has good effects. I also think it has bad effects. I've been doing it all year pretty much, and they still are surprised, some of them, when I pull their Popsicle stick. I'm not sure why because I've told them it's just chance. I do think it gets everyone at least understanding that they may be called upon. Some, and it's not that uncommon, some of them don't care still that they'll be called upon. But usually I think it gets people feeling a little bit more accountable. (personal communication February 5, 2019)

All eight participants reported the use of randomization when calling upon students in class as a strategy to ensure that all students participate in the lesson. Seven of the eight teachers used this strategy during classroom observations, to varying degrees. The prevalent use of this single strategy is the result of a school-wide initiative and school-based professional development. Teacher use of this strategy could be an act of compliance, but observation of student behaviors when randomization is used indicate that this method is familiar to them, probably due to frequent use within the classroom. No students refused to answer when called upon and, while not every response was correct, most responses met teacher expectations and very few students who needed extra time to respond were interrupted by others. Furthermore, teachers explained that this strategy helps them keep all students engaged during the lesson. Regarding the one teacher who did not use randomization during observation, her lesson did not involve whole group instruction. Rather, students were fully engaged in completing a writing assignment that did not involve whole class or partnered discourse. In these types of activities, randomization is not an appropriate strategy for student engagement and

communication. Instead, as in this case, the teacher addresses each student individually throughout the lesson to ensure engagement and to monitor progress.

CTE tends to result in behaviors in which show persistence with students who struggle academically. One of the purposes of this study was to examine which teacher actions may illustrate that persistence. Teachers I, B, H, C, and G reported using randomization and non-volunteer questioning to increase engagement of reluctant students. However, there were noticeable differences in the methods and intentions behind their use. Teachers I, C, and H use questioning to motivate students to want to participate. When discussing reluctant students in interviews, these teachers revealed their intentions that all students will participate and will produce some sort of output. Using words from Teacher H, “they don’t get away with doing nothing”. Further, these three teachers’ mean scores on the CTB scale are within the top half of all participants. This data further emphasizes the finding that teachers who hold a moderately high to high sense of collective efficacy will employ strategies that ensure that all students participate in class and will use these strategies to motivate their more reluctant, or struggling, students.

The responses provided by teachers B and G, on the surface, appear similar to those of Teachers I, C, and H. However, a closer analysis revealed that teachers B and G will call on students as a consequence of not paying attention, rather than as a motivation for participation. Teachers B and G scored in the lower half of the CTB scale. When compared to the responses given by Teachers I, C, and H, those provided by B and G appear to indicate that teachers with a moderate to low sense of collective efficacy may utilize randomizing as a questioning strategy in a punitive manner, rather than in an encouraging one.

Overall data analysis of participant use of randomization indicates that teachers in this study utilize randomization when calling upon students during classroom discourse as a way of ensuring that all students participate in the learning event. While some differences existed in the ways in which teachers utilize this strategy, all participants reported and/or were observed implementing this strategy to ensure student engagement, to varying degrees of success. Analysis of the data showed that the participants who scored higher on the *CTB Instructional Strategies* subscale implemented the strategy with more consistency than those who scored on the lower end of the scale. Another notable difference in the ways that participants utilized randomization as a strategy for engaging students was their approach in supporting reluctant participants. Again, the contrasting behaviors exist between the teachers who scored higher on the CTB scale and those who scored lower on the instrument. In this data set, the important differences were not in the actual behaviors, but in the reported attitudes of the teachers. Teachers on the lower end of the scale reported questioning and pretending to randomize as a consequence for student non-compliance, while teachers on the higher end of the scale used randomization and questioning with reluctant students in the same ways they did when initially addressing the whole class, with the intent to motivate and engage them in learning. This discrepancy in attitude toward reluctant students may reveal a great deal about how or why teachers persist with some students while allowing others to fail. Teachers with a high sense of collective efficacy believe that all students can learn to high levels and show persistence with struggling students, perhaps, because they view students as being willing participants who, at times, need more assistance and motivation than at other times, or than other students. This attitude can be contrasted with teachers who have a lower sense of collective efficacy who believe that some students can learn to high levels and who do not persevere with struggling students because they view some

students as being willing participants and others as being unwilling to learn on non-compliant and deserving of classroom consequences or office referrals.

Engaging Students as Resources for One Another

In order to uncover how CTE influences the methods teachers ensure classroom participation of all students and how CTE plays a part in promoting student autonomy, the researcher examined the ways in which participants reported and demonstrated strategies that engaged students as resources for one another. Participants in this study describe a number of ways in which they engage students in learning by creating opportunities for students to share their thinking in meaningful ways. According to participants, creating a classroom environment that enlists students in collaborative discussion and work helps them build confidence and helps support their learning.

Teachers I and C have CTB scale scores of 8.17 and 7.00, respectively, which are high to moderately high, when compared to all participants in this study. The data regarding these teachers' use of student partnership to provide opportunities for students to act as learning resources for one another indicates that teachers with a sense of CTE will ensure participation of all students by partnering students in order to create interdependence, to promote student autonomy, and to lower affective filters of students.

During Teacher I's interview, she described some of the ways in which she engages students through partnerships with one another. Teacher I responded, "I do have my kids participate in structured conversations and opportunities to share their work, whether it's with a shoulder partner or a grouping" (personal communication February 5, 2019). Here, a structured conversation is a strategy that provides students with a communication framework that may include sentence stems that indicate the expectations of what students are to discuss during the event, and those that help students transition from speaker to speaker as well as extend the conversation. Also, shoulder partner is a

term used to describe someone sitting either to the left or to the right of the participant, rather than someone seated across from them. These structures help students focus on the targeted concepts and promote interdependence and collaboration within the partnership or group.

Teacher I further explained that she utilized student partnerships to encourage reluctant learners to participate in class. She claimed that in addition to partnering herself with students to help them feel more comfortable, she might:

... pair them with somebody who is on a higher level, English proficiency wise. Or, just pair them with a student who I feel makes them feel comfortable and might just have an inviting or welcoming nature that's going to help them feel just willing to participate. (personal communication February 5, 2019)

Teacher C described her classroom instruction as including “a lot of turn and talks. So, they're prompted to talk to their partner, and then you can always figure out who's not participating because when their names are called, they don't have an answer” (personal communication February 4, 2019).

These quotes demonstrated ways in which teachers engage their students in student-student communication by creating times for them to talk with a partner about a particular topic.

Additionally, Teacher C stated that she will sometimes partner with students to help them engage in learning. When students need further motivation, she explained:

And then if they're still not participating, I'll have to partner them with someone to try to get something out of them. Sometimes they really don't know the answer, and so them being able to communicate with a partner refreshes their memory. And they're able to steal that partner's answer and not be afraid to say something on their own because it's really not their thinking. But with them being able to talk

with a partner, they can formulate their own opinion. Sometimes I'll call on, like another group that has a response. Or that I kind of ... because typically you know who's going to be able to answer and who's not going to be able to answer. So I'll call on a group or a person that I know that could answer. And then try to get them to explain like, how they knew that or why they knew that, just so those people that didn't get the answer can kind of reflect back and like, "Oh yeah, I remember when we did that." Because if they hear it from me they're probably not paying attention. But if a classmate can answer, then they know like, "Okay, we did do that. So, I should know that." (personal communication February 4, 2019)

During her classroom observation, Teacher C employed questioning strategies when calling upon students to respond during classroom discourse. Prior to questioning, Teacher C directed students to confer with their partners regarding the topic of study. She then used Popsicle sticks to randomly call upon students to answer questions. In this case, randomization was utilized as a means to support student interdependence. The success of any individual student is dependent upon the ability of the group to collaboratively produce acceptable responses to teacher questions. Students were observed as they shared knowledge through a brief discussion while they constructed a common answer to a particular question. In order to ensure that members of the group communicated and collaborated in such a way that any of them would be able to respond when called upon to represent the group work, Teacher C used randomization to call upon one student to represent all members of the group. Because she designed the lesson to include student interactions and then gave them opportunities to communicate with one another, students were able to answer queries with correct and extended responses. During the lesson, Teacher C moved one student so that he could pair with another student who did not have a partner. This indicates that the teacher observed and corrected a lack of interaction in a

meaningful way, rather than assume a lack of participation due to disinterest. Teacher C appears to understand and value the importance of engaging students through peer interactions. These behaviors are in alignment with Teacher C's rating on the CTB *Instructional Strategies* subscale. Her score was 7.00, which indicates her belief that teachers at the school can affect student learning *quite a bit*. Furthermore, these data illustrate that teachers with a moderately high sense of collective efficacy engage their students in learning by having them rely upon each other as resources in the classroom, which, in turn, promotes and increases student autonomy.

Teachers I and C enacted students as resources for each other to provide opportunities for all students to enter into the learning process. The strategies employed by these teachers promote positive affect by appearing to help reluctant students feel more comfortable in participating in classroom discussions and activities. Reluctant students are encouraged to adopt the responses and thinking of other students in such a way that their participation poses less of a risk than if they were working alone. Additionally, Teacher C notes that reluctant students are more likely to join in the classroom activity when they hear other students responding correctly than when the teacher repeats or reteaches the information. This form of social persuasion may be a powerful motivator for reluctant students because they appear able to recognize that other students are able to respond correctly, so they should be able to do so, as well.

Another strategy that teachers reported using to increase participation of reluctant students was to create a way in which these students could connect themselves with help from classmates. Teachers H and A who have CTB scale scores of 7.33 and 8.83, respectively provided a structure in which students learn what to say when they need assistance from their classmates. These behaviors indicated that teachers with a high sense of CTE will ensure that all students participate by providing them with language to

use in order to ask for help when they are unsure or reluctant in responding in classroom discourse. Teacher H explained that when she asks questions of her struggling students and they don't know how to respond, "the kids will sit there maybe if they don't know, and they'll say, "Well, can I ask somebody for help?" (personal communication February 7, 2019). Furthermore, when connecting with an individual in need of support, Teacher H promotes student interdependence while reinforcing student autonomy by having them ask for assistance from someone other than the teacher. Teacher H relayed:

Even if I ask a question that I ask one kid because I've pulled their card or whatever, if they're looking at me blankly and then they're like, "I don't know," then I'll rephrase my question before I move on and pull another card or tell them to ask somebody for help, so that I make sure that they're understanding how I'm asking the question. (personal communication February 7, 2019)

Teacher A related a similar scenario for her reluctant students:

They get more comfortable. They know that they can phone a friend if they need to, because I started that [strategy] with the randomizing. If they're stuck, my goal is never to embarrass them. My goal is just to check to see if you understand. It does work. (personal communication February 4, 2019)

Planning for and enacting student interdependence creates a classroom climate in which students who are reluctant in participating more readily take academic risks. These students learn that forming partnerships with other students provides a safety in numbers atmosphere where they are less afraid of speaking up in class because they are able to incorporate the ideas of other students into their own responses. Furthermore, reluctant students learn how to ask fellow classmates for help. This practice of interdependence helps struggling students by providing additional resources for them to use during the learning process, while increasing student autonomy

Some participants in this study reported incorporating collaborative group work and student partnerships in order to ensure participation while learning. Teacher A described the various ways in which she has students grouped during collaborative events:

Sometimes they get to pick [their groups] and sometimes it's just random. I'll just put them in assigned seats and be like, you're here. You're here. You're here. Sometimes I group them based on their previous scores from another test. I've done it where I'll group the highs. I'll group the mediums. I'll group the lows. We always have more mediums than anything. I've grouped it where I had one high in each group, and then disperse mediums and lows. (personal communication February 4, 2019)

When asked about the benefits of having students work in multiple small group settings, Teacher A further responded:

... So they can hear other people's ideas or they can have some input from other people, another viewpoint. For example, when you want to know how they all answered a different question. So how did you answer that one? They can hear how they answered that one, and then it might click in their head. "Oh, wait. No, that's wrong. Yours is wrong. I know that mine is a better answer than yours." That way they can have those discussions and maybe learn from them. (personal communication February 7, 2019)

The researcher witnessed this behavior through an observation of Teacher A's lesson. For this lesson, students were seated in groups of three to four and were tasked with collaboratively reviewing their own marked exams. Students had taken the exam on the previous day and the teacher had marked the questions on the exam, according to correct and incorrect responses, but had not noted final scores. Students were directed to work

together to determine and explain the correct and incorrect responses. While all questions on the exam were to be analyzed, each group was assigned one question to present to the class. These questions were the most missed questions for that particular class. Although Teacher A did not provide a specific structure for conversation or collaboration, students directed to work together in their task and were engaged in academic conversations as they compared their responses to the questions and worked together to build their presentations.

The students benefitted from communicating with and gaining the perspectives of their peers and the teacher was able to monitor participation while students were learning from each other. Teacher A's rating on the CTB Instructional Strategies subscale was 8.83, the highest of all participants, which indicates her belief that she and other teachers have the ability to influence student learning, "a great deal". This score is in alignment with her description of how she uses student grouping and collaboration to ensure that all students participate and with the way she implemented this strategy in the observed lesson.

An observation of Teacher D's classroom revealed that most students were seated in groups of three to four while three students were seated in a set of short rows. While this seating arrangement provided the potential for students to work in collaboration as they participated in classroom discourse, Teacher D did not direct students to work together nor provide structures that encouraged student to student communication. Within whole group discourse, the teacher asked mostly volunteer questions while employing occasional randomization strategies when one or two students began to dominate over others either through being called upon after raising their hands, or through calling out answers to teacher questions. When instruction transitioned from whole class instruction to independent practice, students rarely engaged in conversation with each other which

resulted in a missed opportunity for students to use one another as resources for learning. Furthermore, without student collaboration, Teacher D was not able to monitor student thinking within the context of classroom instruction. Teacher D's score on the CTB Instructional Strategies subscale was 6.67 and in the lower half of all respondents' scores. This score combined with her behaviors regarding engaging students as resources for one another indicate that a teacher with a lower sense of CTE is more likely to miss opportunities to engage students through collaborative grouping, which decreases student autonomy, reduces student interdependence, and does not reveal a lowering of students' affective filters.

In another case, Teacher E described how having students sit in groups of three promotes student engagement in class. He related:

I think it helps more because if they're in groups of three, like my class is normally set up, it helps more because if they don't know the answer, they have somebody close enough. And normally they sit with somebody they feel comfortable with talking with to help them answer the question. (personal communication February 7, 2019)

This teacher contrasted this preferred way of student arrangement with the way the classroom was set up on the day the researcher observed his lesson. On the day before the observation, this teacher's classroom had been arranged for benchmark testing and had not been completely reset. The teacher noted a lessening of student engagement in responding to teacher questions and attributed this difference in engagement to not having students sit within small groups and having them engage with one another throughout the lesson.

During this classroom observation, Teacher E used a slide presentation to review concepts regarding ecosystems. Throughout the presentation, the teacher asked multiple

low-level questions in which students were requested to either identify a concept or make a simple inference when presented with a graph or picture of an environment or animal species. Teacher E utilized a randomizing approach when calling upon students to respond. Despite a regular use of this structure, students frequently disregarded the typical solicitation and response pattern that should occur. During classroom discourse, no students were able to answer questions upon first request and on one occasion, a student was prompted to ask a peer for assistance. Other than that occasion, no attempts were made on the part of the teacher to engage the students in peer interactions. The teacher and students were interrupted on multiple occasions by some students asking random questions or were distracted when the teacher corrected minor infractions regarding student use of cell phones or headphones. These behaviors resulted in an incohesive and disjointed lesson and minimal authentic student engagement.

Teacher E's claim that the classroom setup was unusual for the students could have caused the lack of cohesion observed by the researcher. However, little attempt was made by the teacher to correct the seating or grouping of the students and indicates a hesitance to ensure maximum student engagement with each other and with the content. Teacher E intended to engage his students through peer interactions but did not follow through on those intentions. Therefore, students in this classroom were not provided opportunities to engage as learning resources for one another, were not encouraged to act in an autonomous manner, and were not able to use peer interactions to lower their affective filters. This behavior aligns with how this teacher responded on the CTB scale. His overall rating on the *Instructional Strategies* subscale of 5.50 was the lowest of all the participants.

Multiple participants utilized some sort of grouped seating strategy as documented in classroom observations. Four of the nine classrooms were set up so that

students sat in groups of two, three, or four. Of those four classrooms, two teachers utilized strategies that provided structure for student interaction. Teacher C had her students use a “turn and talk” strategy to discuss specific topics and then used randomization to call upon students to share some of the discussion points. Teacher A informed her students that they would work in groups to find solutions to different questions and that all students needed to participate equally because they would teach the class at the end of the period. Teacher A also used a randomization strategy to call upon students to respond to questions prior to them beginning their collaborative task. Both Teacher A and Teacher C walked around the classrooms, monitoring student progress and performance throughout the periods. In both of these cases, students engaged in the activities through participating in academic conversations and working collaboratively by completing guided notes and preparing class presentations. These teachers provided a format for student collaboration and were clear in explaining how students were expected to share their learning afterward. The researcher observed that students stayed on task and responded appropriately to teacher prompts and teacher questions throughout the lesson.

Teachers E and D organized their classrooms into grouped seating; however, no collaborative structures were utilized. For example, Teacher E did not provide clear expectations of how students were to interact with one another. In this classroom there was little to no evidence of student interdependence or collaboration. Classroom discourse, in this case, was disjointed and the lack of flow resulted in the teacher needing to repeat questions. This need for clarification appeared to be due to low student engagement, rather than students not understanding the question or asking for clarification. Students were less likely to answer questions correctly when called upon, even though this teacher utilized randomization when calling upon students. In Teacher D’s classroom, students were moderately responsive while the teacher asked global

questions. Students responded to these questions mostly by calling out responses to questions asked of the whole class, or by answering after raising their hands and being called upon. No structure for collaboration was in place. The result of having students sit in groups without structure is that there was a missed opportunity for students to strengthen their own knowledge through collaboration with others.

The remaining five classes did not employ grouped seating. Students were seated in rows. However, two of the five teachers asked students to partner with each other as part of the lesson. Teacher G asked students to turn and talk with each other about the meanings of certain words and phrases in the context of the passage but did not monitor student communication to ensure that students were following the task as designed. Rather than discussing the designated topic, some students spoke about nonrelated items, while others sat quietly and did not speak to partners, at all. Students involved in off-task behavior struggled to respond to Teacher G's follow-up questions. In another classroom, Teacher H provided times for students to work in partnership with students seated near one another. While there was no specific structure given during this observation, the teacher monitored student progress and performance by walking throughout the classroom, observing student work, answering student questions, mostly with questions, and providing feedback. The students in this classroom were able to respond to teacher questions after collaborative and independent practice. These student behaviors indicate that the teacher may have provided more structure for collaboration in the past and the use of close monitoring by the teacher provided an implied expectation of collaborative and independent work.

Engaging Reluctant Students

Participants in this study shared multiple ways in which they engage students who are reluctant to participate in the classroom. The most common responses involve the

teacher interacting with the student in an attempt to meet the student where they are in the learning process and then to move them forward by motivating them to enter into the learning, rather than addressing the reluctance as an act of non-compliance.

In response to the question of how she ensures participation from her most reluctant students, Teacher I shared that, “for students who are reluctant or shy or whatever is causing them to not want to participate, I will offer myself as a partner just to get them to feel more comfortable or at ease” (personal communication February 5, 2019). In Teacher I’s classroom, students were engaged in completing an essay, largely with assistance from the teacher. All students but one requested and received assistance with interpreting the writing prompt and help with thinking of evidence or examples to support their theses. The reluctant student did not start writing until the teacher approached him and offered assistance. This student appeared to be a beginning English speaker and needed several prompts and encouragement from the teacher. The reluctance to begin writing was likely due to a low proficiency with the English language, rather than a refusal to complete the assignment. With teacher assistance, this student was able to partially complete the assignment.

Teacher C reported using partnership with “students that don’t participate a lot.” This teacher explained that she approaches the students by kneeling at their desks in order to help them “work on their work a little bit, to get them started. Some of them won’t just start on their own. I have to go over and help them” (personal communication February 4, 2019). This specific behavior was evidenced through an observation of Teacher C’s classroom as this teacher noticed a student who was not actively engaged in completing a written task during instruction. Teacher C walked over to the student and knelt by his desk. The teacher quietly interacted with the student as the student began to write on his

paper. After about two minutes, the teacher stood and moved away from the student and the student continued to work on the task.

Additionally, Teacher A discussed encouraging students who are hesitant to participate:

Trying to show them an example helps, because a lot of them don't know where to go from here, and so I'll get past students' work or maybe something I put together and tell them, "This is where you're going. It doesn't need to look identical to this, but this is the right direction." (personal communication February 7, 2019)

Observation data revealed Teacher A demonstrating this specific behavior. After explaining the learning objective and tasks for the lesson, Teacher A modeled her expectations of student outcomes. She provided an example of an assessment item that students were to analyze and showed them the steps they were to use while completing their collaborative assignment. She demonstrated both examples and non-examples of acceptable work. Then, students were directed to begin their assignment. She further modeled how she approaches students who are reluctant to answer or to share their thinking in class:

Tell me something you do know, and then it's like they're digging, and then they'll be like, "Purple." You know? I'm like, "That's exactly right. That's what I was trying to get out of you anyways." They just don't want to speak in front of the class, because they're so afraid of being wrong. Whenever I call on one of my more quiet ones, I'm trying to get better about calling and going towards them, because they don't want to shout, especially if they're not confident enough. But I'm trying to be like, "Okay." Then if I know it's a more quiet student, walking towards them [after they respond to a question] and asking [the class], "Did you all hear what she said?" And then I'll [repeat the student's response]. I would

never broadcast it if it was wrong. I would say, "Oh, she said this. Who agrees?"

Then they'll agree or disagree. (personal communication February 7, 2019)

Similarly, in Teacher H's classroom, a student struggled to begin his assignment without prompting from the teacher. In this case the students were assigned a couple of mathematics problems to practice while being instructed. All students immediately began to work on the problems, except one student who sat with his pencil on the desk until the teacher approached his desk and started asking questions. The questions were prompts that focused on the content, rather than questions about why the student was not completing the task. This student seemed to need the teacher's guidance in working both of the problems. The teacher knelt by his desk and used a combination of questions and commands to lead him through most of the steps and intermittently checked on other students before returning to whole class instruction.

Teachers I, C, A, and H each provided a description, or a demonstration through classroom observation, that indicated that they approach reluctant participants with the intent that these students will successfully complete a task or correctly respond to questions during a lesson. These teachers provide students with an exemplar for the assignment or assistance in finding a starting point. Teachers I, C, A, and H recognize that reluctant students are not refusing to participate but need additional models of expected outcomes. These teachers acknowledge that reluctant students may be hesitant to participate because they have a fear of being wrong, possibly because they do not have mastery experiences to build upon. These approaches edge students forward also by providing students with actionable feedback and information that students are able to build upon in order to remove or get beyond obstacles to their learning.

In contrast to methods described by Teachers I, C, A, and H, Teacher B explained a typical strategy in her classroom when working with students who are not participating as expected:

I sometimes will visit the student one on one, ask them are they frustrated about something? Why aren't they doing this work? What's the hold up? You hear all kinds of things. I have a headache today, miss, I'm sorry. And I do have a policy in my classroom that if you, if you're having a bad day for some reason or other, if you tell me about it, then I'm not going to bug you. I'm going to let you, you know, slide, as long as this is not an everyday thing because you can't learn if things are, if things are emotionally off, you're not going to learn anything anyway, so why should I try to force you into something. But frankly there are some students that I sometimes feel like I just have to triage and not bother with anymore because you have a few, I have a few now, that are simply not going to do what I want them to do. I don't want a battle that then becomes a disruption to the rest of the class. So, if after multiple attempts I can't do anything, then I kind of just stopped trying and that's unfortunate. I have tried referring and doing other things, but all that ends up doing is getting kids sent to DAEP, which, you know, they're not going to do anything there either. (personal communication February 6, 2019)

This explanation indicated that Teacher B cares about the wellbeing of the students, but also showed a lack of determination and persistence when working with the most reluctant of students. Teacher B admitted that she stops trying to get some reluctant students to participate in class. She stated that if a student isn't feeling well, she will allow them to not join in the lesson. She further indicated that she has referred students to the office either as a result of classroom disruption caused by battles that happen when

she addresses reluctant students or to prevent the disruption. These behaviors illustrate a lack of persistence when working with reluctant students. This response from Teacher B, furthermore, may indicate that she perceives a student's lack of participation as a refusal to complete the activity, or an act of defiance that should be met with a disciplinary consequence. In both situations, students are allowed to not participate in the learning event. Teacher B may be, unknowingly, communicating to students that it is permissible for them to not learn in her class.

Classroom observation data indicated that most students participated in the learning process for most of the participating teachers. It is possible that there were so few instances of detectable reluctance due to the presence of the researcher. There were a few obvious exceptions in five of the eight classrooms. One student each in three classrooms were hesitant in starting their assignments, as described in the above descriptions of Teachers I, C, and H's observation data. The remaining three classrooms each had a student with his head down on the desk. Finally, in one of those three classrooms, multiple students did not participate when the teacher asked the class to turn and talk to their partners in response to a question.

Teachers B, D, and G each had one student who kept his head down throughout the lesson. Teacher G made multiple attempts to rouse her student that resulted in brief periods of compliance, but no apparent genuine participation. Teacher G continued with the lesson without gaining the student's full attention and at the end of the period held him in class and talked to him about his past performance in the class and about how he had been improving in the class and that he could do better. The student seemed to agree with the teacher and then left the classroom. Teacher D approached her student twice during whole class instruction. On the second approach, she asked the student if he had participated in a school event during the prior evening. When the student said that he did,

she nodded and stepped away, essentially giving him permission to not participate. Teacher D did not address the student again, even though she was in close proximity to his desk for several minutes. Once whole class instruction was completed, the students were encouraged to work in small groups to complete their assignment. At this time, the student voluntarily moved seats to work with two other students. Finally, a student in Teacher B's class, who had been paying attention at the beginning of class, put his head down about 20 minutes into the 47-minute class period. In this case, the teacher did not address the student at any time.

Furthermore, in Teacher D's classroom, students were directed to talk to their partners on a couple of occasions. Most students exhibited off-task behaviors, such as remaining silent, or talking about subjects other than the targeted topic. Teacher D did not closely monitor student behavior and students were unable to demonstrate learning when requested to do so. Teacher D did not reinforce her expectations by having students repeat the task correctly and students were left unable to answer questions regarding their assigned discussion.

The beliefs and behaviors of the participants in this study closely supported their respective scores on the CTB scale. Teachers C, H, I, and A, who hold scores in the higher half of the total participants, report using teacher to student interactions such as questioning and proximity that indicate an expectation that struggling learners will participate in the learning process. Classroom observation data indicate that Teachers I, C, and H show persistence when interacting with learners who hesitate to begin assignments in class. Additionally, Teachers B and G report the use of questioning strategies to address reluctant students; however, the ways in which they describe these strategies indicate questioning non-participatory students as a consequence for not paying attention, rather than as an encouragement. Also, Teachers B, D, and G exhibit classroom

behaviors that reveal a less determined attitude when some students do not take part in the lesson. Teachers B, D, and G hold CTB scores within the lower half of the total participants.

Observation and interview data indicate that participants in this study had an intention of engaging students in the learning process by using randomization to call on students during whole class instruction and by setting up their classrooms so that students are able to utilize one another as resources for learning. Overall, teachers with a higher sense of CTE provided additional structures and strategies that ensured that these intentions resulted in greater and more meaningful student engagement. Teachers with a higher sense of CTE provided structures that increased student interdependence by requiring them to collaborate with one another throughout classroom discourse, teaching them ways in which to ask for help from one another when needed and by setting the classroom space so that student grouping and partnerships were more effective. Teachers with a lower sense of CTE communicated and demonstrated their intentions of engaging students through similar means but did not provide additional structures that required high levels of student interdependence with the same levels of intensity and teacher support as did participants with the higher sense of CTE. The differences in the ways these two groups of teachers followed through with their intentions resulted in differences in the ways in which all students were successful in engaging in the learning process.

Monitoring and Evaluating Student Progress and Performance

This section describes participant explanations of how they monitor and assess student learning and details of observed classroom behaviors regarding these practices. Of the eight participants in the study, seven teachers reported ways in which they monitor and assess student progress and performance during classroom instruction. Analysis of all eight classrooms' observation data allowed the researcher to recognize a distinct

difference in the behaviors exhibited by the teachers whose mean score on the CTB scale fell in the top half of all the scores as compared to the behaviors of those whose mean score on the instrument were in the bottom half of all the scores. Active monitoring and evaluation of student progress and performance in this study included the use of teacher proximity to students, exit tickets, and teacher questioning during instruction.

For example, in her interview, Teacher I, whose score on the CTB *Instructional Strategies* subscale was 8.17, stated:

For student participation I try to actively monitor the kids while they are working, especially independently. When I'm giving instruction, I do stand at the front of the classroom and I just make sure to just stay in sight of all of the kids. (personal communication February 5, 2019)

Teacher I further explained ways in which she evaluates student performance within the lesson:

I'll use exit tickets to check for understanding at the end of the lesson. And during instruction, I can generally tell how they're doing with comprehension based on what their response is from a question I ask. Or, if it's a writing assignment I'll check their work and that'll tell me where they fall as far as comprehension... If a kid does give me a wrong response or maybe just like an inadequate response, I'll offer a suggestion, or I'll ask another question to help them get to the answer that I'm hoping to get from them. And then for some students, I might suggest another idea or possibility for them to consider. (personal communication February 5, 2019)

Teacher I had classes of less than ten students each. Her classroom is set up so that when she positions herself in the front of the classroom, she is within close proximity of all of the students. For teachers who have larger numbers of students in each class, standing at

the front of the room might not provide the best vantage point from which to monitor all students.

While in Teacher I's classroom, the researcher observed the teacher as she guided students into their lesson. Students were seated in two short rows that faced a center aisle. While sharing the objective for the day, the teacher stood in the center aisle and directed the students to choral read the objective, which was written on a whiteboard. The students in this class are all first- or second-year English language learners and choral reading the objective allowed Teacher I to listen for word recognition and pronunciation. After the objective was shared and the teacher gave directions for the task of completing an essay, she moved about the classroom from student to student, clarifying the objective and providing language supports to each student. In some cases, the students requested assistance and in others, Teacher I moved to the students and either read what they had written so far or asked them questions or made suggestions to help them begin their writing.

Furthermore, Teacher I described how she uses monitoring and evaluation to determine when students are not grasping the topic of instruction and then addresses the specific needs of those students:

By now, I know my kids and I know the ones that have typical reluctance. Those kids I know I need just to do something to push them and motivate them a little bit more. That might just be more words of encouragement or just telling them why it's important for them to do what I'm asking of them and how it's beneficial and why it's important and that's when I might refer to the learning expectation or objective for the day. If it's not typical behavior from a kid I might have a one-on-one conversation with them just to see if it's something within my power to fix or it might be another issue that I might need further assistance with. I'll offer words

of praise. I'll tell them what I liked about their answer or their work or what they're doing well... I don't want them to leave class without anything, so I still expect some type of work from them because then I can look at it and see, okay, this is where the confusion is, or this is where I need to improve my teaching. (personal communication February 5, 2019)

Through classroom observation, the researcher witnessed Teacher I assisting a struggling student in the manner she described. Students had been assigned a writing prompt regarding how technology has changed their lives. All of the students in this class are beginning or intermediate level English learners and have difficulties writing in English. Throughout the class period, Teacher I assessed student progress and performance by moving from student to student asking and responding to questions and providing a variety of scaffolds in support of students while they worked to complete their assigned task. One student was highly reluctant and did not begin his writing process until Teacher I approached him, knelt by his desk and assisted him in getting started. It appeared that the student would not have attempted this assignment at all, without help from the teacher. Teacher I persisted in working with this student until he produced something in writing.

Teacher A explained her methods of evaluating student learning during the lesson by using exit tickets and displaying questions for student response at the end of a lesson: “Sometimes we'll just do exit tickets, and I'll just go around and check them. I have PowerPoints with all the released STAAR questions, and we'll answer them, maybe three or four at the end of a lecture” (personal communication February 7, 2019).

These specific methods of monitoring and evaluating student progress and performance were not evidenced in her observation; however, Teacher A utilized strong methods for doing so. During her classroom observation, Teacher A directed students to collaborate

while creating presentations to be given at the end of the task. While students were completing their assignment, Teacher A walked around the classroom and interacted with each group. She answered and asked questions of each group of students as they analyzed their work on an assessment that had been given on the previous day. Teacher A supported students by helping them clarify their thinking on why they responded correctly or incorrectly on the assessment items. She asked groups how they might understand the questions being asked by restating the questions and prompted students within the groups to use their notes if no one in the group had information to offer when deciding how to answer the questions. Teacher A worked with students on different ways to process their thinking by suggesting that they draw pictures that represent the content or by focusing their attention on certain aspects of graphics that were embedded within the questions. Occasionally, the teacher would query the entire class by asking a question and then randomizing which students would be called upon to respond. All of these behaviors allowed Teacher A to monitor the ongoing work of all the students in the class and to ensure that they were working toward a successful outcome.

Similarly, Teacher C positioned students so that they worked in collaborative groups to respond to questions during whole group instruction. Students were provided structured notes outlines and were led through a slide presentation as the teacher used randomization techniques to call upon students to answer questions. Prior to most of the initial questions, Teacher C directed students to discuss a topic “with the first person in [their group] that [they] made awkward eye-contact with” (personal communication February 4, 2019) and then allowed them time to discuss the subject. As students talked with their peers, Teacher C walked around the room, listening to partner conversations. At one point, she moved one student to partner with another pair of students. She appeared to do this because that particular student was not partnering within the group

where he was seated. This action indicated that Teacher C listened closely to student conversations and acted when student behaviors did not match her expectations. After students transitioned into independent practice, they were encouraged to use their partners as resources. Teacher C walked over to a student who appeared to be struggling in completing the assignment and knelt at his desk and interacted with him until he seemed to have a better understanding of the task. She then continued to move about the room and monitored student work, checking in with each student.

Teacher H, whose mean score on the CTB scale was 7.33, the third highest score of the participants, reported her methods of evaluating student learning during the lesson:

During instruction, especially in the “we do” or “you do” part, I try to get around to each one of them. And I’ll say, “Yeah, you’re on the right track.” Or, “Uh, no wait ... ” I try to correct them before they get discouraged, because they will get discouraged if they do the whole thing wrong. So, getting over to them and saying, “Hey, yeah. Yeah, it looks good. Looks good. Or, nope. Wait, go back and look at this” helps. Just quick feedback, so that they can see whether they’re on the right track. If it’s the whole group time and they’re not getting it right, I try to ask the question in a different way because sometimes maybe they didn’t get the question that I was asking. So rephrasing my question before I automatically assume, “Oh no, they got it wrong.” (personal communication February 7, 2019)

Teacher H’s use of the terms, *I do* and *you do* refer to different phases of a gradual release model of instruction. The *I do* phase includes whole class instruction in which the teacher models what the students are expected to learn; in this case, the *I do* phase is one in which the teacher provides examples of mathematics problems. The *you do* phase is one in which students work in partnership to practice the instructional target. In this case,

the students were directed to practice problems similar to the model provided by the teacher.

The method of monitoring and assessing student learning reported by Teacher H indicated that she observes and evaluates students while they are completing a task for the purpose of adjusting instruction during the lesson. Based on Teacher H's interview comments, her intention is to provide actionable feedback to students so that they can correct mistakes while the mistakes are being made, not after. Furthermore, she does this so that students may remain optimistic about their work in her class. During Teacher H's observation, she interacted with each student and evaluated all student work as she walked around the classroom.

The responses provided by Teachers I, A, C, and H illustrate that they employ methods that evaluate the progress of all students during the lesson through assessing work in progress or through the use of exit tickets. Also, these teachers share multiple methods of assessment, which may indicate that they provide a variety of ways for students to demonstrate their learning.

The researcher witnessed that Teachers I, A, C and H interacted with all students in each classroom during their observation periods. Teacher I, whose students were completing a writing assignment, spent time working with each student, reading and discussing their writing and offering feedback throughout the assignment. Teacher A exhibited similar behavior as her students worked collaboratively to build class presentations. Teacher C monitored students as they completed guided notes and as they participated in structured conversations within class discussions. Teacher H monitored student work as the students practiced mathematics problems in pairs and independently. The importance of these behaviors is that the teachers made themselves aware of the progress and performance of each student, which allowed the students to receive timely

and actionable feedback during the learning process. Furthermore, these behaviors align with align with their scores on the CTB Instructional Strategies scale, which were all in the top half of all participants. This alignment between CTB scale score and teacher reported and observed behaviors indicates that a teacher with a high sense of collective efficacy will endeavor to evaluate the progress and performance of every student in the classroom.

Teachers B and G claimed that they use questioning strategies to determine whether students are learning during the lesson. Teacher G stated that she tries to, “to ask them a bunch of questions so if they don't know it, I know that they don't know the material, and I need to keep asking questions” (personal communication February 6, 2019). She also described what she does when her evaluation of student learning indicates that students are not mastering the content:

We back up. Usually if there's one who needs it, there are far more that I just am not seeing. So, if I can see that one person needs me to back up it's likely that a lot of them do, and they're just not letting me know. So we back way up and we go over it again, and I try to ask them questions that are a little bit more supportive, like I put some of the assumptions in the question to give them a little bit of scaffolding and a little bit of a foundation for what they're about to answer with, so give them some more clues in the questions. (personal communication February 6, 2019)

Teacher B also described the use of questioning as she evaluates student learning during the lesson:

The questioning that I do use can often help me figure out whether they're learning, but sometimes it's not enough time to change the lesson to accommodate, so it has to be something that's worked on the next day. Really the

only thing you can do, I think is questioning. I can't think of another strategy.

How do you know what's going on in their mind, unless they tell you what's going on? (personal communication February 6, 2019)

This response by Teacher B illustrates her motivation behind the questioning strategy, to ascertain what is going on in the minds of students, which indicates that she is interested in what or how a student is thinking. However, her response also reveals that, to her, questioning is the only method of evaluating student learning. Furthermore, she believes that classroom questioning does not allow for a modification of the lesson and that, for this reason, adjustments are held until the following lesson.

Observation data regarding Teachers B and G revealed that these participants did not monitor the progress and performance of every student in their classrooms. Both teachers spend the majority of the class period at the front of their classrooms. While these locations did provide adequate vantage points from which to monitor student behavior, Teachers B and G did not closely monitor the progress or performance of each student. For example, Teacher G asked her students to turn and talk to their partners to discuss facets of the story they were reading. However, she did not appear to monitor student behavior during this activity and students were not successful in responding to questions the teacher asked when checking for understanding. While Teacher G has reported using structured conversations successfully in the past, her lack of monitoring during this observation did not produce successful outcomes for students. Rather, students were called upon to respond to questions and those who did not participate as expected were not able to provide correct answers. Teacher G observed one of her students sleeping and made an attempt to engage him in the lesson by calling his name until he raised his head. After briefly appearing to pay attention, the student put his head down, again. The teacher made another unsuccessful attempt at engaging this student

during whole group instruction but did not approach his desk or use proximity when making these redirection attempts.

Teacher B remained at the front of the classroom for most of the instructional period. While she did use questioning strategies that allowed both volunteer and non-volunteer student responses, she did not include student collaboration or monitor students through proximity. Either of these strategies would have enabled Teacher C to observe and evaluate the thinking and written work of each student in the classroom. One of the results of Teacher B's behavior was that one student fell asleep in class and was not addressed and required to participate. This lack of monitoring could indicate a difference in motivation that can be found among teachers with varying perceptions of collective efficacy. Teacher B and Teacher G have mean CTB scores of 5.83 and 6.83 which fall within the lower half of all participant scores.

Teacher E, whose score on the CTB scale was 5.50, had his classroom set up so that most students were seated in small groupings of three. Students were guided through a slide presentation and were supposed to follow along with this presentation on their own laptops by completing notes throughout the lecture. Even though students were seated in a manner that supported collaboration and interdependence, no attempts were made by the teacher to engage students in this manner. Furthermore, while Teacher E did walk around the classroom throughout instruction, he did not monitor student progress in completing the notes. Students were minimally engaged in learning and showed little evidence of learning in that some students interrupted instruction by asking random questions and no students were able to respond correctly to questions by the teacher upon first attempt.

Teacher D, whose mean score on the CTB scale was 6.67, the third lowest of all the participants, also indicated that she evaluates student work in order to determine whether students are learning:

If it's a writing assignment, I'll try to stop by and read a couple of them, or I'll have kids come up and ask me questions for clarification. So, I'll just take some samples of what's happening around the classroom. So, I try to use proximity for physical participation; walk around the classroom. If I know a student's having issues staying on task, I might stay there for a little bit longer, but I try to make a couple laps to make sure everyone is at least doing something. (personal communication February 5, 2019)

The researcher interpreted that the language used in this response indicated that Teacher D assesses the work of some students, but not the work of all students, during instruction. What is unclear in this response is whether Teacher D intends to connect with all students every day in order to assess learning during instruction. During Teacher D's classroom observation, the researcher noted that while she did move about the room throughout the period, this teacher did not review the work or otherwise interact with every student during the instructional period. This behavior resulted in not every student being directly monitored or acknowledged by the teacher. Furthermore, one student in this class was allowed to not participate during the whole class instructional phase of the lesson and was observed to be sleeping on and off during this phase. Teacher D spoke to this student about this behavior but did not require him to participate or to stay awake.

One of the purposes of this study was to identify teacher behaviors that indicated high expectations for learning for all students. One of the first steps in ensuring that all students learn is to plan and implement instructional activities in which all students participate during the learning process. All participants within this study averaged 5.00

points or higher on the CTB scale, indicating that all participants held collective efficacy beliefs at least “to some degree.” Interview and observation data showed that each participant utilized student grouping, student structured conversations, randomization in questioning, or teacher proximity, or a combination of two or more of these four strategies to ensure that all students participate in learning. One notable behavior detected in classroom observations separated the teachers precisely in half. When ordered from lowest to highest on the CTB scale, the teachers with the top four rankings, Teachers C, H, I, and A, checked-in, or made some sort of verbal contact with every student in the classroom at least once during the lesson. The teachers with the lower four rankings, Teachers B, E, D, and G did not check in with every student. Furthermore, one student in each of Teachers’ B, D, and G classrooms appeared to be sleeping during the lesson.

This observation data indicated that the participants in this study who score higher on the CTB scale utilize multiple strategies to ensure that all students participate in the learning event, while the same set of strategies can be used and not all students are guaranteed to participate in class. The key difference is that the teachers on the higher end of the scale authentically check in with every student by talking to them and by monitoring their actual progress within the lesson. They observe student work in progress, rather than waiting until a later time, if at all, to recognize when or if students need assistance.

Summary of Findings

Participants in this study utilized a variety of strategies that communicated high expectations of student engagement, showed persistence when working with students who struggled, academically, and promoted student autonomy. Analysis of interview and observation data revealed that teachers communicated learning intentions with students in efforts to promote student autonomy, employed questioning strategies, including

randomization when calling on students, and structured lessons that embedded student grouping and collaborative learning structures to create and maintain student engagement. Teachers monitored and evaluated student progress and performance during learning and used formative data to support students who failed to master learning objectives within a single class period.

Data from the CTB Instructional Strategies subscale indicated that CTE scores ranged from 5.00 to 8.83, meaning participants degree of belief that efforts of the faculty at the school of study have a positive effect on students ranged from *to some degree* to *a great deal*. Two teachers responded with a mean score greater than 8.00. Three teachers obtained a mean score between 7.00 and 7.99. Two teachers obtained a mean score between 6.00 and 6.99, and two teachers obtained a mean score between 5.00 and 5.99. These mean scores indicated that the participants in this study hold the belief that, collectively, teachers can affect student performance, at least, *to some degree*, with the majority of respondents believing that the teachers at the school can influence student performance *quite a bit*, with two teachers reaching scores approaching *a great deal*.

Throughout data analysis and reporting, the researcher found that the eight participants described their own behaviors and were observed in the classroom in ways that essentially divided the group into top and lower halves, with the top half illustrating beliefs and behaviors indicative of teachers with high CTE and the lower half holding beliefs and demonstrating behaviors of teachers with lower CTE. Meaning, participants in the top half of the group used instructional strategies that communicated high expectations of student engagement, showed persistence when working with students who struggled, academically, and promoted student autonomy in a more consistent and integrated manner than those in the lower half. Essentially, the teachers with a higher sense of CTE executed lessons and strategies that initiated and maintained engagement of

all students and positively supported struggling students. These participants approached teaching and learning with the attitude that all students will participate successfully throughout lesson and that when students show evidence of not learning, they work diligently to ascertain and correct student misunderstandings. Teachers with a lower sense of CTE implemented lessons that were inconsistent in engaging students in learning and showed less persistence when approaching students who struggled.

In other words, teachers with a high sense of CTE clearly communicated to all students that they were expected to learn in their classrooms and then monitored and evaluated the work of every student to ensure that learning occurred. Teachers with a lower sense of CTE did not consistently communicate high expectations of learning to all students and did not monitor and evaluate the work of every student during the lesson.

CHAPTER V: SUMMARY OF FINDINGS, IMPLICATIONS, AND RECOMMENDATIONS

The researcher examined and analyzed the beliefs and instructional practices of eight English, mathematics, science, and social studies regarding engagement of all students, and persistence with students who struggle academically. It was determined that teachers' levels of CTE as determined by the CTB scale influenced their beliefs about and implementation of instructional practices that impact learning of all students.

Findings from analysis of participant responses to the Collective Teacher Beliefs (CTB) survey, semi-structured interviews, and classroom observations indicated certain differences between the participants who reported a mean score of on the CTB survey between 7.00 and 9.00 and those who reported mean scores between 5.50 and 6.99. Two teachers each of English, mathematics, science, and social studies from a small school district in southeast Texas participated in this study by completing the survey, responding to interview questions and being observed during classroom instruction. Data were gathered and analyzed to answer the following research questions:

1. How does CTE influence teacher behaviors that promote all-student participation during instruction?
2. How does CTE influence how teachers react to students who are reluctant to participate during instruction?
3. How does CTE influence teacher behaviors that promote all-student learning during instruction?
4. How does CTE influence how teachers promote student autonomy during instruction?

Collective teacher efficacy is described by Goddard, Hoy, and Woolfolk Hoy (2000) as teacher perceptions that their combined efforts will positively influence student

success. Teachers who hold this belief have been found to exhibit a common set of behaviors and attitudes that support positive student outcomes, including communication of high expectations for learning, commitment to students and to the teaching profession, flexibility in trying new approaches to instruction, promotion of student autonomy through student-centered instruction, and exhibition of greater effort and persistence when working with students experiencing difficulty in learning (Donohoo, 2017; Donohoo, 2018; Hattie, 2017).

This mixed methods study utilized participants scores on the CTB scale, semi-structured interviews and observations of instructional practices to uncover specific instructional strategies that illustrated how teachers with collective efficacy communicated high expectations for learning for all students, evidenced persistence with students who struggle academically, and promoted student autonomy. Participants completed the TCB scale, participated in individual semi-structured interviews, and demonstrated instructional practices during classroom observations.

Summary of Findings

RQ1. How does CTE influence teacher behaviors that promote all-student participation during instruction?

This study found that teachers utilized a variety of strategies to promote student participation during instruction and that the teachers with a higher sense of CTE were more consistent with the use of these strategies and that their intentions behind the use of some of these strategies were more positive than those teachers with a lower sense of CTE, as reported through the CTB scale. Strategies that emerged in this study involved randomization when calling on students to respond in class discussions and ways in which students were engaged as learning resources for one another.

Randomization when calling on students. All participants in this study reported or demonstrated the use of randomization when calling upon students to respond during classroom discussions. This finding is consistent with research indicating that teachers with CTE communicated high expectations for learning for all students (Donohoo, 2017; Donohoo, 2018; Hattie, 2017) and research findings on the use of randomization when calling on students as a strategy to create the expectation for students that they could be called upon to respond and are therefore provided a sense of accountability for demonstrating their learning (McDougal & Granby, 1996; Dallimore et al., 2006).

The use of randomization when calling on students illustrated an expectation that all students are accountable for learning throughout instruction and communicated to students that they must be prepared to respond in class at any given moment. Participants in this study who obtained higher scores on the CTB Instructional Strategies scale were more consistent in the use of randomization and provided students with cooperative structures that helped ensure student success when called upon to demonstrate their learning. Participants who obtained lower scores on the CTB Instructional Strategies scale utilized randomization less frequently, in general, and did not provide the additional structures to support student success. These differences suggest that teachers with a higher the sense of CTE will give more effort to ensuring high levels of participation and engagement than those with a lower sense of CTE.

Engaging students as resources for one another. Participants in this study shared ways in which they employed cooperative structures and student groupings to enable students as resources for one another during learning. This finding is consistent with research indicating that teachers with CTE communicated high expectations for learning for all students (Donohoo, 2017; Donohoo, 2018; Hattie, 2017). Also, the use of cooperative structures to engage students in learning is consistent with findings from

Cavanaugh (2011) that cooperative work encouraged students to be active participants in their learning and can be related to Hermann (2012) who found that in-class participation increased when students were exposed to cooperative learning in tutorial sessions. Furthermore, the findings of this study regarding the use of student collaboration to enact students as learning resources for one another are consistent with Wiliam (2011) who claimed that activating students as instructional resources for one another serves to lower students' affective filters and motivates them to participate because doing so personalizes students' learning experiences and enhances cognitive elaboration.

Providing opportunities for students to share their thinking with one another through partnerships or small group settings increases their potential for success by allowing them to safely test their thinking in a more intimate setting than that of a whole classroom. This strategy also enables students to hear the multiple perspectives of others, which helps them build upon their own knowledge and understanding of the content. In these ways, teachers communicate to students an expectation that all students will learn and will be able to demonstrate that learning during instruction. Results of this study showed that teachers with a higher sense of CTE will implement lessons that utilize student cooperation and collaboration more consistently and with more intention than those with a lower sense of CTE.

Ensuring all-student participation. Overall, teachers with a higher sense of CTE were more intentional in their use of randomization when calling on students and their use of student grouping and collaborative structures than those with a lower sense of CTE. Furthermore, higher CTE resulted in the likelihood that these structures would be used in combination to ensure that all students participated in the learning events. This finding illustrates a set of strategies that teachers with CTE utilize as they communicate high expectations for learning for all students.

RQ2. How does CTE influence how teachers react to students who are reluctant to participate during instruction?

Participants in this study reported and demonstrated the same strategies of using randomization when calling upon students to respond in class discussions and employing cooperative learning structures to address reluctant participating students as those for all students. However, differences in teacher attitudes regarding the use of these strategies arose between teachers with a higher sense of CTE as compared to those with a lower sense of CTE. The results of this study indicated that the teachers with a higher sense of CTE as demonstrated by their scores on the CTB Instructional Strategies scale were in alignment with the research findings that teachers with CTE showed persistence with reluctant students (Donohoo, 2017; Donohoo, 2018; Hattie, 2017).

Randomization when calling on reluctant students. Teachers who obtained higher scores on the CTB Instructional Strategies scale reported using randomization when calling on students to boost engagement of those who were reluctant in participating. The ways in which these teachers described their use of this strategy illustrated an attitude that randomizing increased the chances of calling on reluctant students over the use of selecting students who volunteered to answer in class because reluctant students are less likely to raise their hands or to voluntarily engage in classroom discussion. Teachers with high CTE called on reluctant students with the expectation that they would be successful demonstrating their learning.

These attitudes are contrasted with those of teachers who obtained lower scores on the CTB Instructional Strategies scale. These teachers indicated a use of randomization when calling on students as a consequence of non-engagement. Furthermore, these teachers were less likely to utilize randomization over voluntary methods of eliciting responses from students during classroom discussions. This behavior

seemed to communicate that the teacher was more interested in catching reluctant students in wrong behaviors, rather than supporting these students in a successful demonstration of their learning. The differences in attitudes of participants in this study indicate that teachers with a high sense of CTE will use randomization, or non-volunteer questioning as a means of persisting with reluctant students. These findings are consistent with those of McDougall and Granby (1996) who found that using traditional voluntary methods of calling on students to respond in class had the negative effect of reducing accountability for students who were poorly prepared to participate in class and that using non-traditional methods, such as randomization, increased accountability for all students to participate in learning events. Furthermore, the findings in this study are in alignment with those of Dallimore et al., (2010) who concluded that using cold-calling methods such as randomization increased student participation in class and as student participation increase, student comfort in responding increased.

Ensuring reluctant student participation through engaging students as resources for one another. Teachers with a higher sense of CTE reported and demonstrated engaging students as learning resources for one another when addressing students who were reluctant in class participation. These strategies included providing opportunities for students to briefly turn and talk to a partner about a question that had been asked and allowing reluctant students to ask for help from other students if they were unsure of how to respond to a question. Teachers with high CTE provided these structures and then monitored student behaviors to ensure that students utilized them appropriately. These teacher behaviors were not evidenced in the interviews and classroom observations of teachers with a lower sense of CTE. Teachers with low CTE either showed no attempt at enacting students as resources for one another by either not providing student grouping or by not giving students opportunities to share their thinking with one another or provided

these structures but did not follow through to ensure that students utilized these structures to support or enhance their learning. The use of cooperative structures to engage students in learning is consistent with findings from Cavanaugh (2011) that cooperative work encouraged students to be active participants in their learning and with Wiliam (2011) who found that activating students as instructional resources for one another serves to lower students' affective filters.

Ensuring reluctant student participation. In order to ensure that reluctant students had the opportunities to participate and to demonstrate their learning, teachers with high CTE made time for students to share their thinking with one another, used randomization when calling on students to respond, and supported reluctant students by suggesting that they ask for help from other students when they were unsure how to respond correctly to teacher questions. All of these behaviors illustrate how these teachers persist with reluctant students. Using these strategies in combination seem to be the key to high levels of support for students who are reluctant in participating in class. Furthermore, teachers with high CTE demonstrated an attitude that reluctant students will successfully demonstrate mastery of the content and utilized the strategies mentioned above to make learning a reality for these students.

RQ3. How does CTE influence teacher behaviors that promote all-student learning during instruction?

This study found that teachers with a high sense of CTE consistently referenced and demonstrated behaviors that monitored and evaluated student progress and performance during learning. These behaviors included the use of proximity to students and questioning practices during instruction. These behaviors are consistent with the research findings that teachers with CTE communicated high expectations for learning

and showed persistence with reluctant students (Donohoo, 2017; Donohoo, 2018; Hattie, 2017).

The marked difference between teachers with high CTE and those with lower CTE evidenced through monitoring and evaluation of student work is that teachers with high CTE monitored and evaluated the work of every student during instruction, while teachers with lower CTE monitored and evaluated the work of some, but not all, students during instruction. These teacher behaviors allow teachers and students to take part in formative assessment that provides students an understanding of where they are in meeting learning intentions and gives teachers information needed to direct their next instructional steps. Therefore, teachers with high CTE are better equipped to help students detect and correct misunderstandings during instruction so that misconceptions are less likely to become embedded learning for students.

Teachers with high CTE were more likely than teachers with lower CTE to move toward struggling learners and provide additional questioning supports and encouragement that motivated the students to achieve the learning goals for the lesson. Furthermore, teachers with high CTE expressed their belief that all students can learn, given enough time and support while teachers with the lowest CTE divulged that some students won't learn. These beliefs were evidenced in classroom behaviors, as well. Teachers with high levels of CTE moved about the room and engaged with every student during the lesson and teachers with lower CTE tended to remain in one location throughout the lesson and did not engage with every student.

RQ4. How does CTE influence how teachers promote student autonomy during instruction?

This study found that participants promoted student autonomy by communicating learning intentions in writing and verbally. This action allows students to set and monitor

their own learning goals. Effective use of this strategy is consistent with participant scores on the CTB Instructional Strategies scale, with one notable exception. In general, teachers with a high sense of CTE set learning intentions prior to planning instruction and shared these goals with students at the beginning of the lesson. This action allowed students to set personal learning goals and take ownership of their own learning. During instruction, teachers with high CTE monitored and assessed student progress toward meeting the goals through the use of proximity to the learners and questioning strategies to evaluate and provide feedback on student progress and performance. Teachers with lower CTE are less consistent with sharing learning intentions at the beginning of the lesson and are less likely to monitor and assess student progress and performance throughout the lesson. The results of this study indicated that the teachers with a higher sense of CTE as demonstrated by their scores on the CTB Instructional Strategies scale are consistent with the research findings that teachers with CTE communicated high expectations for student learning and showed persistence with reluctant students (Donohoo, 2017; Donohoo, 2018; Hattie, 2017). Furthermore, the results of this study align with researchers who found that in order for students to assess their own learning, they must first have a clear understanding of their learning goals and of what success in meeting those goals looks like and that sharing learning intentions with students allows them to set and monitor their own learning goals (Black & Wiliam, 1998; Cauley & McMillan, 2010; Wiliam, 2011). Finally, the results of this study agree with Black and Wiliam (1998) who found that the use of formative assessment produces gains in low-achievers and with Wiliam (2011) who established that using questioning during instruction can be used to determine where students are in their learning and to provide students with feedback that moves their learning forward.

One inconsistency between CTB score and behaviors that promote student autonomy was evidenced in this study. One teacher with a lower sense of CTE enacted a thorough system in which learning intentions were shared, connections were made between current and prior learning, new vocabulary was defined, and students were directed to evaluate their own levels of mastery pertaining to foundational knowledge and new content. This teacher had the most years of teaching experience and had participated in professional development focused on analysis of learning objectives and building a system of teacher and student monitoring of progress toward meeting those objectives.

Implications

This study examined the influence of CTE on teachers' beliefs and behaviors related to communication of high expectations for learning, addressing the needs of reluctant learners, and the promotion of student autonomy, which resulted in multiple implications for district and school administrators and teachers. Topics discussed in this section are focused on curricular and instructional needs and practices. District level administrators are responsible for setting the instructional tone for all of its schools. This includes supporting schools and teachers with appropriate funding, articulated curriculum documents, teacher professional development, and monitoring of program implementation. School administrators are given autonomy and responsibility of hiring and supporting teachers, monitoring implementation of district curriculum and initiatives, building and maintaining school-level initiatives and professional development, and promoting a school climate in which teachers are encouraged and supported in their own learning. Teachers are accountable for the implementation of curriculum, monitoring and evaluating student progress and performance, and creating a learning environment that ensures that all students learn at high levels.

Implications for District Administrators

District administrators are responsible for setting the instructional tone for all schools that they serve. The results of this study indicate the need for the creation of a collaborative atmosphere through which teaching and learning are valued as intertwined, reciprocal events. The first factor that must be considered is the promotion of collective teacher efficacy. In order to increase collective efficacy among all district employees, district level administrators must attend to the four tenets of efficacy beliefs: mastery experiences, vicarious experiences, social persuasion, and affective states. To translate and further the results of this study, these tenets must work in conjunction with one another across all levels, and the goal of collective efficacy should be defined for educators and clearly communicated as a district-wide initiative. While educators cannot be mandated into collective efficacy, practices can be put into place that support educators in building their belief that when they work in collaboration, they can create student success. District administration should take care in ensuring that pockets of success in any area of the district are shared and celebrated with all schools. One possible way of creating this type of atmosphere is to initiate cross-school partnerships, or professional learning communities, between administrators and teachers so that instructional practices that result in high student achievement become common across the district. Also, professional development designed at the district level should utilize strategies that reinforce collaborative efforts and promote collective efficacy.

Next, district administrators must grapple with the implementation of an authentic system of formative assessment. Formative assessment, when viewed as complete cycle of events begins with clarified learning intentions which evolves into student autonomy. District administrators are responsible for providing a well-articulated curriculum that must be understood by all teachers for implementation in the classroom. This curriculum

should include not only the content to be learned, but also suggestions of ways in which teachers can successfully support student learning. In order to reinforce collective teacher efficacy, teachers should be included in the creation of curriculum documents, along with curriculum experts at the district level. Furthermore, professional development should center on the multiple facets of formative assessment: communicating learning intentions so that students are able to formulate personal learning goals, designing classroom instruction that includes engaging learning events and effective formative assessment strategies, providing feedback that moves students forward in their learning, enacts students as learning resources for each other, and activates students as owners of their own learning. Each of these facets has its own set of strategies that teachers must learn and be supported in implementation.

Implications for School Administrators

School administrators serve very similar roles as those at the district-level in that school-level administrators are responsible for setting the tone for collective teacher efficacy in their building. The same actions that take place district-wide should be implemented at the school level in order to promote mastery and vicarious experiences, social persuasion, and positive affective states. At the school level, actions that promote CTE become more individualized. School level administrators are charged with collaborating with teachers in creating a school vision that establishes that the efforts of the faculty, when working collaboratively, can positively affect student learning. Embedded within this vision is the assumption that all students, when provided with targeted, engaging instruction can learn at high levels. While this belief is easily met by some educators, others will need the support of mastery and vicarious experiences, social persuasion, and positive affective states in order to begin to perceive that all students, including reluctant learners, can experience academic success. Therefore, teachers must

be allotted time within their workday to meet and collaborate with their peers, individual successes must be shared and celebrated as a school, and teachers must participate in school-level professional development that supports their own learning and growth.

Once structures are put into place that allow for and promote teacher collaboration, professional development centered around how to form and effectively work within teacher teams must be provided. Teachers who have not participated in collaborative planning will most likely not know how to use this time. Teachers will possibly need guidance on how to collaboratively translate curriculum documents into effective and engaging instruction and common assessments of student progress and performance. They will also need assistance in using data gathered from common formative assessments to formulate instruction that moves all students forward in their learning.

School administrators should also seriously consider providing professional development that guides teachers through a system of formative assessment which includes effectively sharing learning intentions with students, guiding students in the development and self-evaluation of personal learning goals, planning and implementing engaging learning experiences for students, formatively assessing student progress in goal attainment, enacting students as learning resources for one another, and activating students as owners of their own learning. Professional development on student engagement should include ways in which all students are held accountable in being active participants in learning, including the use of cooperative learning structures and non-volunteer methods of choosing students to share their thinking, such as the use of randomization when calling on students to respond during classroom discussions. Teachers may also need development in designing formative assessments and providing

feedback to students in ways that cause thinking on the part of the student and enable them to move forward in their learning.

School administrators will benefit from their own professional development regarding promoting and maintaining collective teacher efficacy, assisting teacher teams in being effective collaborators, and recognizing and supporting teacher efforts in implementing systematic formative assessment.

Implications for Teachers

Teachers are the creators of all learning events for students; therefore, it is imperative that their beliefs and behaviors align with the assumption that the work that they do, as a group, has the power to positively affect all students' learning and that all students can learn to high levels. As relayed in the previous two sections, the results of this study indicate that CTE influences the beliefs and behaviors of teachers and that teachers with CTE communicate high expectations of learning to students, persist with reluctant students and promote student autonomy through instruction. The specific beliefs and behaviors held by participants who held high levels of CTE were that sharing learning intentions and monitoring student progress are important actions, that all students should be held accountable for participating in classroom activities, and that given appropriate support, all students can learn to high levels. These teachers also utilized cooperative structures and student grouping to activate and maintain student engagement, randomized when calling on students to respond during class discussions so that all student, and monitored and assessed the progress and performance of every student in their classrooms. While teachers with lower CTE utilized some of these same strategies, it appeared that their beliefs in student accountability and that all students can learn to high levels were not consistent with teachers with high CTE.

Provided that district and school level supports mentioned in the previous two sections are in place, teachers will likely need to reflect upon their own beliefs and practices regarding collaborative efforts and student abilities. In this regard, it is imperative that teachers gain a sense of their own CTE and become knowledgeable about the positive influences that CTE can have on their professional practices. Teachers will need to fully participate in collaborative team meetings that involve planning lessons which engage and assess all students during instruction and need to be willing to share their instructional practices and resources with members of their team. This may be a more welcomed task for some than for others.

Furthermore, teachers should engage themselves in professional learning opportunities that focus on systematic formative assessment, as previously described, and then work with their collaborative teams as they implement strategies learned through professional development sessions. Throughout this process, teachers should consider inviting peers and administrators into their classrooms and request feedback on teaching practices learned or reinforced through professional development or through collaborative team meetings. And, teachers should offer to do the same for their peers. In these ways, teachers learn to trust and value the input of others, especially that of their peers; which is not unlike the ways in which teachers with CTE engage their students as learning resources for one another. Most simply put, teachers need to consider themselves learners within their professional community. The practices that teachers utilize to effectively initiate and reinforce learning for their students are the same ones that they should practice themselves.

Recommendations for Future Research

The findings in this study were based on surveys, interviews, and observations of eight high school teachers, for a total of 24 interactions between the researcher and the

participants. Although the data gathered during this study provided a vivid illustration of how CTE influenced the beliefs and behaviors of these teachers in regard to their expectations of learning for all students, their persistence when addressing the needs of reluctant learners, and their promotion of student autonomy, expanding this knowledge through future research is recommended. This study took place at a small high school in a small district in southeast Texas. The first recommendation is to conduct this study in a way that includes a larger demographic area, such as multiple schools, multiple districts, or states, multiple grade bands. The high school of the study had a high minority, low-socioeconomic student population. Applying a broader scope through including schools with a variety of student demographics would also be advisable. Another consideration regarding broader demographics would be to complete this study at the post-secondary level. Additionally, this school involved teachers of English, mathematics, science and social studies, all of whom were directly responsible for teaching content on state accountability exams. Including teachers of the same subjects who are not equally responsible for teaching state accountability related courses and teachers of other subjects would be an advisable addition to the findings of this study.

Regarding the data gathered in this study. Participant demographics included only a range of years of teaching experience and gender. Adding descriptors related to amount and types of professional development experience may have added depth to the analysis of the data and to the outcomes of the study. Also, the limited number of interactions between the researcher and participants allowed for patterns between participants to emerge but did not allow the researcher to collect information regarding patterns of behaviors and beliefs within each participant. Therefore, another recommendation would be to include multiple interviews and observations per participant. Also, survey, interview and observation data were collected over the span of a few months. In addition

to conducting multiple interviews and observations, extending data gathering over a longer period of time may indicate different results. Therefore, this researcher recommends designing a study that takes place over a longer time span.

Past research has established that CTE influence teacher beliefs and behaviors pertaining to trying new strategies or taking instructional risks (Donihoo, 2017; Donihoo, 2018). This study focused on the influence of CTE on teacher beliefs and behaviors regarding expectations of learning, persistence with reluctant students, and promotion of student autonomy. Another recommendation would be to include interview questions and classroom observations that describe any influence of CTE on teachers' willingness to try new instructional strategies. Also, another recommendation regarding the content, or data collection of this study would be to expand the study's examination of teacher beliefs and behaviors related to activating students as owners of their own learning or promoting student autonomy. This study reflected teacher use of sharing learning intentions as a baseline for promoting student autonomy. However, a review of the literature indicates that other instructional practices promote autonomy, including some missed opportunities on the part of the researcher (Black & Wiliam, 1998; Cauley & McMillan, 2010; Wiliam, 2011). These missed opportunities included data tracking of the use of formative feedback and the employment of strategies that enacted students as learning resources for one another. Had the researcher included interview questions connecting these behaviors and student autonomy, connections might have been made that would enhance the results of this current study. Therefore, a final recommendation would be to focus on multiple teacher actions that promote student autonomy throughout the length of the study.

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APPENDIX A:
INFORMED CONSENT TO PARTICIPATE IN RESEARCH

You are being asked to participate in the research project described below. Your participation in this study is entirely voluntary and you may refuse to participate, or you may decide to stop your participation at any time. Should you refuse to participate in the study, or should you withdraw your consent and stop participation in the study, your decision will involve no penalty or loss of benefits to which you may be otherwise entitled. You are being asked to read the information below carefully and ask questions about anything you don't understand before deciding whether or not to participate.

Title: Collective Teacher Efficacy: Its Influence on Teacher Beliefs and Behaviors in Classroom Instruction

Principal Investigator(s): Joda Mendoza, M. Ed

Faculty Sponsor: Sandra Browning, Ph. D

PURPOSE OF THE STUDY

The purpose of this study was to examine the relationship of collective teacher efficacy (CTE) on cognitive rigor of planned and enacted questions and collective teacher efficacy on two facets of formative assessment: (1) how teachers engage students in thinking about and responding to questions, and (2) how teachers provide feedback to student responses to teacher questions.

PROCEDURES

Participation in the study will require you to complete a survey regarding collective teacher efficacy and in observations of classroom instruction. It may also require that you

participate in semi-structured interviews regarding instructional practices and collaborative planning, and in observations of team meetings.

EXPECTED DURATION

The total anticipated time commitment will be approximately 5 months during the school year.

RISKS OF PARTICIPATION

There are no anticipated risks associated with participation in this project.

BENEFITS TO THE SUBJECT

There is no direct benefit received from your participation in this study, but your participation will help the investigator(s) better understand how collective teacher efficacy may affect the questioning and feedback utilized in your classroom. Findings may lead the district to make needed changes to strengthen the support and professional development you receive.

CONFIDENTIALITY OF RECORDS

Every effort will be made to maintain the confidentiality of your study records. The data collected from the study will be used for educational and publication purposes, however, you will not be identified by name. For federal audit purposes, the participant's documentation for this research project will be maintained and safeguarded by the Joda Mendoza for a minimum of three years after completion of the study. After that time, the participant's documentation may be destroyed.

FINANCIAL COMPENSATION

There is no financial compensation to be offered for participation in the study.

INVESTIGATOR'S RIGHT TO WITHDRAW PARTICIPANT

The investigator has the right to withdraw you from this study at any time.

CONTACT INFORMATION FOR QUESTIONS OR PROBLEMS

The investigator has offered to answer all of your questions. If you have additional questions during the course of this study about the research or any related problem, you may contact the Student Researcher, Joda Mendoza, M. Ed, at or by email at

SIGNATURES:

Your signature below acknowledges your voluntary participation in this research project. Such participation does not release the investigator(s), institution(s), sponsor(s) or granting agency(ies) from their professional and ethical responsibility to you. By signing the form, you are not waiving any of your legal rights.

The purpose of this study, procedures to be followed, and explanation of risks or benefits have been explained to you. You have been allowed to ask questions and your questions have been answered to your satisfaction. You have been told who to contact if you have additional questions. You have read this consent form and voluntarily agree to participate as a subject in this study. You are free to withdraw your consent at any time by contacting the Principal Investigator or Student Researcher/Faculty Sponsor. You will be given a copy of the consent form you have signed.

Subject's printed name:

Signature of Subject:

Date:

Using language that is understandable and appropriate, I have discussed this project and the items listed above with the subject.

Printed name and title

Signature of Person Obtaining Consent:

Date:

APPENDIX B:
INTERVIEW PROTOCOL

Questions pertaining to collaborative instructional planning:

1. Please describe your participation in team instructional planning and how this structure influences your classroom instruction.
2. Instructional planning includes building in opportunities for you to check student understanding. One way to accomplish this is through classroom questioning. How do you decide which (oral) questions will best target learning objectives?

Questions pertaining to classroom instruction - general:

3. How do you set your expectations for student learning each day? How are those expectations generally communicated to students?
4. What are some ways in which you ensure that all students are participating in learning during class? (participation) What do you do when students don't participate?
5. What are strategies that you use to determine whether students are learning during the lesson? (performance) What do you do when students don't learn?
6. How do you typically provide feedback to your students during classroom instruction?

Questions pertaining to classroom instruction – questioning:

7. How do you decide which students to call upon during classroom questioning?
How does this method affect student learning / participation?
8. What are your typical moves when students answer incorrectly during classroom questioning? If they answer correctly?
9. What do you believe is the greatest influence on your students' achievement? Why?