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How Master Teachers Conceptualize Student Engagement: A Comparison of Theoretical and
Practitioner Perspectives

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of
Philosophy at Virginia Commonwealth University.

by

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Dedication and Acknowledgement

This work is dedicated to my family. Those who know me understand this term to be a loaded one, including a wide circle of blood relatives and close friends, but I want to specifically recognize my immediate family. First I dedicate this to my wife Katie. Thank you for your love, understanding, and rock-solid support, not just in regards to this work, but for always encouraging me to pursue my passions. May we always climb our biggest mountains together, and may there always be a celebration on the other side. To my father Glynn and mother Andrea, no one could ever have greater cheerleaders, sounding boards, or helping hands. Thanks for showing me to love learning and for letting me fall asleep in a bed full of books. To my sister Alexis, thank you for always being the unconditional one; ILY YATBSE. To my grandparents, those who have passed on while this was being written and those who left us decades earlier, each of you was an incredible teacher and coach in your own way. I believe much of who I am as a student and teacher comes from you. Finally, to my son Jimmy, may you too find your passion, and may it bring you as much happiness as teaching and learning have brought to me.

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Abstract

HOW MASTER TEACHERS CONCEPTUALIZE STUDENT ENGAGEMENT: A COMPARISON OF THEORHETICAL AND PRACITIONER PERSPECTIVES

By Andrew D. Baker, M.Ed.

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

Virginia Commonwealth University, 2017.

Dissertation Chair: Dr. Sharon Zumbrunn
Associate Professor, Foundations of Education

Over the past twenty years, an increasing amount of research has been devoted to the study of student engagement within the field of educational psychology. This led to a growing body of research touting the benefits of engaged learning—from increased student achievement to more positive school experiences for learners. However, the literature is characterized by competing theoretical frameworks and multiple definitions of the construct of student engagement. Additionally, few works seek to capitalized on the expertise of classroom teachers to hone and develop what is known about engagement from the theoretical perspective.

The current study used qualitative methodology to observe and interview master teachers, as defined by their designation as a National Board Certified Teachers, to learn how expert teachers define student engagement and how these conceptualizations match up to current theoretical frameworks. It also examined the sources for their professional knowledge of student engagement.

The individual teachers defined student engagement through the presence of interest, engaged behaviors, social interaction, real world connections, strategic thinking, and positive student-teacher rapport. As a group, their answers support a four-dimensional construction of student engagement including *affective, behavioral, cognitive* and *social engagement*, which aligns well with one of the major theories of engagement within educational psychology. These teachers' beliefs include an emphasis on real world connections to learning within cognitive engagement, and student-teacher rapport within social engagement that has yet to be explored deeply in the literature.

Teachers identified multiple sources for this knowledge including experience, peer interactions, the NBCT process, and guidance from school leaders. While some noted formal professional education as a source, they saw classroom experience reflective and embedded professional development as more formative. This work shows these master teachers arrived independently at constructions for student engagement close to those proposed by the research community. It supports a meta-construct of student engagement that includes *affective, behavioral, cognitive* and *social* processes, and calls for greater theoretical advocacy within the study of engagement to help more teachers fully conceptualize student engagement without the need for trial-and-error learning and extensive classroom experience.

Chapter One: Introduction

Statement of Problem and Rationale for Study

In 2004, the National Research Council (NRC) published a large scale work examining the lack of student engagement in American schools, claiming that by the time of high school, “student disengagement from course work and serious study is common” (p. 4). The language and implication in that statement are clear. Many students are not just disengaged from time to time—disengagement is routine. In some cases, more than 40 to 60 percent of students expressed low levels of engagement in American high schools according to the examination (NRC, 2004). Though engagement has been a focus of educators and researchers for years, with reports like the NRC’s, a push to reengage and reinvigorate students emerged as more urgent and dire than in previous generations (Jimerson, Campos, & Grief, 2003).

The educational community is right to worry about students who do not regularly experience engagement in school. High levels of engagement are associated with many positive outcomes for K-12 classrooms. Students who are highly engaged in their learning show higher achievement on end-of-unit assessments (Marks, 2000), statewide standardized tests (Archambault, Janosz, Morizot, & Pagani, 2009), and final grade point average (Conner and Pope, 2013). They are also less likely to cheat, enjoy school more often, and report a better relationship with the school itself (Conner and Pope, 2013). Student engagement has also been shown to increase students’ overall motivation and will to succeed in academic environments despite setbacks (Appleton et al., 2008). Alternatively, low levels of student engagement can

lead to higher dropout and failure rates in grades K-12 (Ladd and Dinella, 2009; Shernoff, 2008). Findings from other studies show that fostering engaged learning in minority students can significantly mitigate the negative effects of low-SES and poverty on both achievement and retention (Shernoff, 2008).

Though often used as a predictor for and outcome of educational interventions (e.g. Marks, 2000, Turner et al., 1998), the idea of “engagement” lacked real clarity and constancy in terms of its operational definition at the time of the NRC’s report (Fredricks, Blumenfeld & Paris, 2004). Schools, research groups, and instructors all called for more engaged learners, but few could agree on what engagement in schools looked like. Because of this discrepancy, scholars set out to examine how engagement had been defined in the past, and suggested a more consistent and multi-dimensional model that might help impact an approach to promoting engagement in schools (Jimerson et al., 2003; Fredricks et al., 2004). Even with these suggestions, the literature base for student engagement is still plagued with inconsistency in modeling and construction of the term (Eccles, 2016), so much so that some researchers have noted the possibility of abandoning the use of engagement as a defined construct within educational psychology altogether (Azevedo, 2015).

The stakes are too high to completely forsake the use of student engagement in scholarly work though. Engaged learning is associated with too many positive outcomes— from lower dropout rates (NRC, 2004; Shernoff & Schmidt, 2008) to fewer honor violations on assessments (Conner & Pope, 2013), and from happier experiences at school (Shernoff, Csikszentmihalyi, Schneider, & Shernoff, 2003) to higher achievement scores (Ladd & Dinella, 2009). In addition, we should see engaged learning as a valuable outcome in and of itself (Shernoff, 2012). It is not difficult to argue the position that students *should* feel involved and invested during instruction.

What engagement research needs is a fresh perspective. Much of what is known about student engagement derives from abstract theorizing of the construct and self-report measures to validate these theories (Fredricks & McColskey, 2012; Eccles, 2016). Little qualitative work exists to confirm or modify an appropriate theoretical framework for student engagement (Wang, Fredricks, Hofkens, & Linn, 2016). In addition, few works have incorporated the knowledge of teachers in engagement theory (Fredricks et al., 2004; Wang et al., 2016). Rich, qualitative, data collection from classroom teachers can help strengthen current theory of engagement to help the academic understanding of the construct and make a more valid, detailed, and useable conceptual design.

Research Background

Since the call for a more unified theoretical framework was issued (Fredricks et al, 2004; NRC, 2004) divergence in the field's definition of engagement remains (Eccles, 2016), but most definitions of engagement include *affective*, *behavioral*, and *cognitive* elements (Fredricks, Filsecker, et al., 2016). Many of these distinctions were generated through the work of Fredricks and colleagues in a 2004 review of engagement literature. They noted scholars often focused primarily on behavioral engagement, but had examined cognitive and affective factors during various studies (Fredricks et al., 2004). This multi-dimensional theory, which is referred to as the *ABC* theory throughout this study, looks at engagement along three sub-processes—*affective*, *behavioral*, and *cognitive* (Fredricks et al., 2004).

Within the *ABC* model, *affective engagement* refers to a student's emotional investment in the instruction. *Behavioral engagement* is characterized by the student's actions in relation to the instructional demands of the lesson and *cognitive engagement* is defined as the student's perception that the learning is important and/or relevant. Whereas an affectively engaged student

may enjoy the lesson, or have an emotional connection with the teacher that helps make the learning more meaningful, a behaviorally engaged student stays on task and visibly participates in the lesson, and a cognitively engaged student might link the lesson to other things he or she has learned, or see the learning as a valuable experience in attaining his or her goals.

Despite the increased specificity of the ABC model over the past decade, researchers continue to approach engagement in other ways. Sometimes engagement is studied using other psychological constructs like flow psychology (Shernoff, 2012), self-regulated learning (SRL) (Jarvela et al, 2016), or demand-resource model (Salmela-Ara, Moeller, Schneider, & Spicer, 2016). Flow psychologists, for example, see engagement as a state along the *flow* continuum, while others believe that SRL and collaborative learning are key components of engaged learning. A more practitioner-oriented model, developed through consulting work with school divisions, has also appeared in research listing six different levels of student engagement based on varying levels of attention and commitment (Schlechty, 2011). Others use student engagement to categorize a student's sense of belongingness in a school community (Reschly & Christenson, 2006). In addition to these competing models, some scholars have added extra dimensions to the ABC framework including *agentic engagement* (Reeve, 2013), *social-behavioral engagement* (Linnenbrink-Garcia, Rogat, & Koskey, 2010), and *psychological engagement* (Appleton, Christenson, Kim, & Reschly, 2006). All three of these additional sub-processes incorporate the student's impact on his or her learning environment or interactions with others in an overall model of engagement.

With so many different approaches, the academic discussion of engagement is more like a large room with many separate conversations than one ongoing dialogue. Azevedo (2015) summed up the discrepancy well, "engagement is one of the most widely misused and over-

generalized constructs found in the educational, learning, instructional, and psychological sciences” (p. 84). Despite this challenge, the study of engagement has come a long way. Though many works continue to define the construct in their own manner, scholars often acknowledge the ABC model as the dominant theory to emerge over the past two decades (Boekaerts, 2016). This suggests the slow merging toward a unified theory, which is important to produce a useable model to be used in educational practice. In addition, unlike many classroom factors that impact student performance, achievement, and experience, engagement is decidedly malleable (Azevedo, 2015; Eccles, 2016; Fredricks, Filsecker, et al, 2016; Shernoff, 2012). Policy makers, administrators, and teachers may have a difficult time changing student socio-economic status or prior levels of education, but engagement is largely dependent on the immediate learning environment as controlled by the teacher (Marks, 2000). Because of the classroom-specific and malleable nature of student engagement, some have dubbed its study “the holy grail of learning” (Sinatra, Heddy, & Lombardi, 2015, p. 1).

Although a great deal of scholarship on engagement has occurred since the Fredricks, Blumenfeld, and Paris work in 2004, one particular area in student engagement research may hold the key to evaluating the ABC theory and other constructions of student engagement. In their review, Fredricks et al. stated “research that takes a qualitative approach to understanding the phenomenology of engagement is needed” (p. 86), but since then, few works on the topic have revisited this call for more qualitative analysis (Turner, et al., 2014). In many ways, “engagement is one of the hottest research topics in the field of educational psychology” (Sinatra et al., 2015, p. 1), but few examine the construct through qualitative interviews of practitioners in the classroom. Fredricks, Wang, et al. (2016) recently conducted a qualitative examination of both teachers and students in math and science classes, and found the data to be confirmatory of

the ABC model. The team sat down with these teachers and students and asked them to define engagement and what engaged learning looks like from their perspective. However, the team's questioning included prompts that asked students and teachers to explain their thoughts, feelings, and behaviors when engaged in learning, which weakens the argument that the responses independently align with theory. It is not so surprising that interview responses included affective, behavioral, and cognitive descriptions of engagement when the follow up questions requires the participants to consider thoughts, behaviors, and feelings. The study is exceptionally valuable, because it addresses the lack of qualitative data within engagement literature, but it focuses on only teachers and students in two academic domains and was largely conducted to create a self-report measure for engagement in math and science classes.

With exception of the Fredricks, Wang, et al. study (2016), much of the work surrounding engagement has been conducted without the input or participation of teachers, and almost none of it has been qualitative. As a teacher, teacher-coach, and teacher-educator, I believed this to be a critical oversight. Engagement matters to researchers, because it has long been associated with many positive outcomes for students (Sinatra et al., 2015), but the daily experience of a classroom teacher often hinges on his or her ability to effectively engage learners. Not only are engaged students more successful in class (Marks, 2000), it is often much more enjoyable to teach engaged learners in a classroom.

More qualitative work was needed to support the findings of the two decades of theorizing student engagement, and to expand on qualitative inquiry like Fredricks, Wang, et al. (2016). This work must include the voice of teachers to help confirm and/or adjust the theoretical landscape of engagement research and to help make a construction of engagement that incorporates the teacher perspective as opposed to a researcher-only approach. The

incorporation of pedagogical knowledge within the theory of engagement will ultimately make the construction more useful in instructional practice, because it will consider the approach of the individuals who actually leverage engagement to improve teaching on a daily basis.

Before this sort of study could be designed, it needed to determine the most valuable pool of participants. Fredricks, Wang, et al. (2016) chose math and science teachers, focusing on a domain-specific selection process. However, other approaches could also be used to help advance the theory. One of particular merit was the tradition of using experts in qualitative inquiry to help build knowledge of a given topic (Mason, 2010; Trotter, 2012). This strategy relies on the perspectives of an elite group of professionals who show extensive knowledge of their field and are able to effectively communicate their expertise to others (Trotter, 2012). In schools, we often refer to these experts as *master teachers*.

While there were many ways to identify effective and masterful teachers (Goe, Bell, & Little, 2008), one metric—the achievement of *National Board Certified Teacher* (NBCT)—has been shown to be an effective and consistent measure of overall teacher quality and effectiveness (Cavalluzzo, Barrow, Henderson, Mokher, Geraghty, and Sartain, 2015; Cavalluzzo, 2004). To become an NBCT, a teacher must submit detailed portfolio entries to the National Board of Professional Teaching Standards (NBPTS), which includes video recordings of their instruction, documented accomplishments in the profession, reflective writings on practice, and artifacts of student work. They also must pass a domain-specific exam relevant to their subject and level of instruction (NBPTS, 2016). Teachers pursue certification in one of twenty-five certificate areas from Pre-K through secondary education which include a variety of content areas, including art, reading, science, social studies, and language arts (NBPTS, 2016). The goal of NBPTS include a desire to “(1) maintain high and rigorous standards for what accomplished teachers should know

and be able to do,” and “(2) provide a national voluntary system certifying teachers who meet those standards” (NBPTS, 2014, p. 2). Research has shown NBCTs often demonstrate significantly higher levels of teacher self-efficacy than non-certified colleagues (Woods, 2013); they have also been identified as exceptionally helpful and collaborative members of school faculties (Frank et al., 2008) and are more likely to engage in teacher leadership and professional development initiatives (Loeb, Elfers, & Plecki, 2010). The rigorous National Board Certification program requirements for teachers to describe, evaluate, and reflect upon their teaching practice throughout the process make them a viable sub-set of teachers designated as experts by rigorous standards and adept at communicating their practice to others.

This study used master teachers—defined by NBCT certification—to help build upon engagement theory by determining how expert teachers conceptualize student engagement, and how they construct their own knowledge about student engagement. Through observations of and interviews with these master teachers, this study added a practitioner voice to what is known about engagement and compare the teachers’ constructions to current theoretical frameworks. The responses of the instructors, while not necessarily generalizable to all practitioners, supported several of the theoretical frameworks for the construct of student engagement, helped enrich understanding of different elements of engagement, and identified sources of knowledge of student engagement in these master teachers.

Research Questions

The questions guiding this inquiry are:

1. How do NBCTs conceptualize student engagement?
2. What are the sources of teacher knowledge about student engagement?
3. How do NBCTs’ conceptualizations of engagement compare to current theory?

Research Design and Methodology

As suggested by Maxwell (2013), the overall design of this work included consideration of initial conceptual frameworks guiding the study. This work began with the conceptual assumption that: (1) there are many different ways to define engagement, but the Fredricks et al. (2004) ABC model is most complete framework for the construct, (2) teachers will see engagement as multi-dimensional, (3) NBCTs are master teachers and experts of practice, and (4) teacher understanding of engagement comes from multiple sources and experiences. Based on this conceptual framework the present study used classroom observation, written lesson reflections, and semi-structured interviews of NBCTs to gather qualitative data that will address each of the three research questions.

Participants for this study were ten master secondary teachers from a large, public, Mid-Atlantic school district. A constant-comparative method of analysis (Boeije, 2002; Corbin & Strauss, 2008) was used to analyze and synthesize the data to develop answers to the research questions

Statement of Purpose

The purpose of this research was to add teacher experience and expertise to current theory on engagement. Despite multiple attempts to survey and unify the literature base (Appleton, Christenson, & Furlong, 2008; Fredricks et al., 2004; Jimerson et al., 2003) and two special editions of scholarly journals devoted solely to the explanation of the construct (i.e., *Educational Psychologist* in 2015 and *Learning and Instruction* in 2016) engagement research is full of competing theoretical constructions. The research had come too far at this point to abandon prior work and start from the ground up, but the inclusion of the pedagogical knowledge of teachers in engagement theory helped add clarity and weight to the existing frameworks. Next,

this work aimed to advance engagement theory into a relatively unexplored area by seeking to find out how teachers learn about engagement. This understanding not only helped inform the study's other goals—a teacher's responses may have aligned closely with one particular model of engagement because she read about the theory in college—but it also helped researchers understand the factors shaping instructor views on engagement. With this knowledge more effective communication can occur between research and practice and the ultimate utility of any theory of engagement was strengthened. The third goal was to compare master teachers' constructions of engagement to current theory. Did teachers tend to agree with the ABC model? Did teachers include agentic or social components in engaged learning like those suggested by Reeve (2013) and others? Was the teacher view of engagement something entirely different? By including master teachers in the scholarly conversation, the field can learn how close its theory is to matching that of practitioners.

The final goal for this project was a personal one. I am both a researcher and practitioner, and in both roles I am fascinated with the process of engaging learners. I have found great value in theories of engagement, in my own practice and in my development of other teachers as a teacher-coach, professor, and professional developer. I also felt my practical experience has provided me with a different understanding of engagement when compared to my colleagues in academia. I knew that teachers are talking about engagement in schools around the world, and I believed educational psychology can create useful models and tools to help teachers make their learning more effective and meaningful for students. As an NBCT myself, I also understood how the certification process identifies and strengthens reflective practice in teachers, and I saw NBCTs as ideal partners in engagement research. With this project I hoped to bridge the research-to-practice gap that has long been identified in education (Hammersly, 2000) by

combining the resources of researchers and practitioners to advance the study of student engagement so that both theory and practice could learn from one another and move closer to a useable model of engaged learning.

Definition of Terms

1. Student Engagement— a multidimensional state that describes a learner’s level of involvement and investment in classroom instruction (Fredricks et al., 2004).
2. ABC Model for Student Engagement (ABC)— the specific model for student engagement that includes *affective*, *behavioral*, and *cognitive* sup-processes (Fredricks et al., 2004).
3. Affective Engagement—a student’s level of emotional engagement in reaction to instruction (Fredricks et al., 2004).
4. Behavioral Engagement— participatory learning behaviors of a student during instruction (Fredricks et al., 2004).
5. Cognitive Engagement— the level to which a student views the learning as meaningful during instruction (Fredricks et al., 2004).
6. National Board Certified Teachers (NBCTs)- instructors who have been accredited by the National Board of Professional Teaching Standards in a one or more of the 25 certificate areas upon successful completion of National Board candidacy (NBPTS, 2016).
7. National Board for Professional Teaching Standards (NBPTS)- “an independent, nonprofit organization working to advance accomplished teaching for all students” by creating and maintaining the National Board certification process (NBPTS, 2016, p. 1).
8. The Jones and Dexter holistic model for teacher learning- a framework for understanding sources of professional knowledge in teachers categorizing learning experiences as

formal, informal, and independent learning (Jones & Dexter, 2014; Jones & Dexter, 2016).

9. The Interconnected Model of Teacher Professional Growth (IMTPG)- a conceptual framework of teacher learning explaining how teachers use external sources of pedagogical knowledge to change their instructional beliefs and practice. This model includes four interconnected domains: the external domain, the domain of practice, the domain of consequence, and the personal domain. These domains interact with one another through the mediating processes of reflection and enactment (Clarke & Hollingsworth, 2002).

Chapter 2: Literature Review

It has been often suggested that educational researchers and practitioners occupy two different worlds, and that a wide research-to-practice gap separates them both (Carmine, 1997; Hammsersly, 2000). An unfair portrait is sometimes painted whereby teachers, policy-makers, and administrators are shown to be most concerned with strategies and ideas that will help them perform the difficult job of transferring knowledge to new generations. Scholars, professors, and researchers, on the other hand, sometimes focused more on theory, statistical significance, and publication (Beycioglu, Ozer, & Ugurlu, 2010). The gap, in my experience, is perhaps not as drastic as to create an “us vs. them” mentality (Carmine, 1997), but the connection between scholarly knowledge and practitioner needs is often lacking even in well intentioned and well run institutions in both worlds (Hammsersly, 2000). Through my own work in schools, I agree that teachers are most receptive of research-based practices when they are useful, relevant, and support the daily work of the teacher (Desimone, 2009). I see an even weaker connection between practitioner knowledge and scholarly needs. There are many cases in educational theory, especially in educationally psychology, where the incorporation of teacher experience and knowledge may be a solution to problems plaguing researchers attempting to create valid and useable theories of learning (Beycioglu et al., 2010).

One area of the field in need of additional theoretical and scholarly work is the study of student engagement (Eccles, 2016). The construct holds great potential for both theorists and professional educators (Azevedo, 2015; Boekaerts, 2016). Engagement has recently been

described in the research community as “the holy grail of learning” (Sinatra et al., 2015, p. 1). This statement is fitting; scholars from various traditions have attempted to study engagement and see its study as a valuable endeavor, yet a full conceptualization of engaged learning remains somewhat elusive (Eccles, 2016). As a teacher, teacher-coach, and teacher educator, I adamantly concur; an understanding of engagement can lead to better instruction and better classroom decision making (Fredricks, 2012; Marks, 2000). Our jobs as educators are greatly impacted by our ability to engage learners—to make them pay attention, invest themselves in the instruction, and to actively play a role in the learning environment. As a teacher, many of my lunchroom discussions, hallway conversations, and lesson reflections with colleagues and supervisors center on the engagement levels of my students.

A parallel dialogue about engagement seems to also exist in the research community, and researchers, in many ways, share the profession’s desire to understand and promote engaged learning. In 2004, the National Research Council (NRC) published a large scale work examining lack of student engagement in American schools, claiming that by the time of high school “student disengagement from course work and serious study is common” (p. 4). Since then, multiple works have attempted to synthesize, summarize, or advance the theoretical framework for student engagement in educational psychology (e.g. Appleton et al., 2008; Fredricks et al., 2004; Jimerson et al., 2003). These two groups, teachers and researchers, are trying to understand and explain the same phenomena in their own ways. One uses experimentation, professional learning, and reflection to learn about engagement; the other uses scholastic inquiry and research.

As an active member in both the teaching profession and the research community surrounding the study of engagement, I have noticed that while both groups care a great deal

about engagement, they speak different languages. I also have seen that master teachers, individuals who are recognized by colleagues and students as exceptional in practice, talk with one another about student engagement on a regular basis in a way that might be of special interest to the scholarly field. As I have become more involved in both worlds, I believe practitioners and researchers have a lot to offer one another when it comes to conceptualizing student engagement. By combining their efforts, teachers and scholars may come closer to capturing this holy grail of learning.

The following sections outline major approaches to engagement and show how these diverging theories often are more similar than they may first appear. I then make a case for the inclusion of the voice of high-performing teachers in the academic conversations of student engagement. I then explain why Nationally Board Certified Teachers (NBCTs) should serve as a population of master teachers to be used as participants in research surrounding student engagement. Finally, I outline two models for sources and development of professional knowledge in teaching that help understand how these master teachers learn about student engagement within their practice.

Conceptualizing Student Engagement

The research surrounding engagement, with its various constructions, definitions, and approaches, is both vast and varied. My goal is not to serve as a historian for the construct in this chapter. This study focused on practitioner constructions of student engagement, therefore a variety of models for engagement are discussed in this chapter. It was necessary to include multiple constructions for student engagement in this review, so the responses of the participants could be interpreted through various theoretical lenses. On the other hand, some of the measures and instruments for this study relied on a deductive understanding of engagement, using one

particular model (the ABC model) as its theoretical framework. Because of this, I conclude the discussion of multiple approaches to engagement with a case for the ABC model as the most useful for the present work.

In regards to nomenclature, this review uses the term *student engagement* as opposed to *school* or *academic* engagement. Sometimes these terms are used interchangeably, and in other cases *school engagement* implies a different construct from student engagement (Shernoff, 2012)—one that focuses more on a student’s feeling of inclusiveness in relation to a school culture as opposed to active involvement in reaction to instruction at a given time. *Student engagement* was chosen because of its common use over other similar terms in research over the past fifteen years (Appleton et al., 2008), and because, in my experience, teachers rarely use the term academic engagement or school engagement in professional speak. Using a term common in “teacher-speak” helped both in the research process and in the overall pragmatic value of this research, so that the findings could be oriented to language used in practice as well as in theory (Hammersly, 2000).

Many have made the case that student engagement is necessary for a healthy educational experience in children and adolescents (Shernoff, 2012). Students who are regularly engaged in learning are more likely to graduate, pass their classes, and perform well on end-of-course assessments (Archambault, Janosz, Morizot, & Pagani, 2009; Finn & Rock, 1997). Highly engaged learners often have higher grade point averages than less-engaged peers (Conner & Pope, 2013; Ladd & Dinella, 2009). The benefits of engaged learning are not just correlational in nature—it could just as easily make sense that successful students are more engaged—experimental work also suggests that classroom teaching can impact engagement and increased engagement can lead to better performance on tasks related to instruction and positive feelings of

the students in response to the lessons (Christensen, Reschly, & Wylie, 2012; Fredricks et al., 2014; Marks, 2000). All of these positive factors associated with highly engaged learning may help contribute to the “holy grail” mindset attributed to its study. Researchers keep asking questions about engagement, because many works suggested that an increase in student engagement equals positive outcomes for learners.

A problem existed in the link between theory and practice, however. Though often used as a predictor for and outcome of educational interventions, the idea of “engagement” lacks real clarity and constancy in terms of its operational definition (Fredricks et al., 2004). Yes, engagement is being studied, but it not studied in a consistent manner. Much of what is known about engagement relies on a variety of operational definitions of the term. Schools, research groups, and instructors all called for more engaged learners (NRC, 2004), but few could agree on what engagement in schools looked like (Eccles, 2016). In this section, I outline several of the prominent models for student engagement. I then comment and critique the body of literature as a whole. Finally, I make the case for the Fredricks ABC Model as the most complete and useable construction for student engagement.

Approaching Student Engagement from Outside Constructs

Flow theory. In a holistic analysis of engagement research up to 2015, Roger Azevedo explained “in some cases, the construct is used either implicitly or synonymously and interchangeably with other widely used terms, such as motivation and flow” (p.84). I begin the examination of various engagement models with a discussion of these cases—ones where scholars approach engagement through outside constructs in educational psychology. As Azevedo (2015) noted, one camp of engagement research draws on the tradition of *flow*. Flow theory stems from the work of psychologist Mihalyi Csikszentmihalyi (1975/2000) who defines

the state as one of deep involvement and investment within a task or activity (Nakamura & Csikszentmihalyi, 2002). According to flow theorists, when an optimal balance of challenge and perceived skill faces an individual, an internal state of deep concentration, enjoyment and psychological engagement occurs (Csikszentmihalyi & LeFevre, 1989). Individuals in powerful flow states often lose track of time during the activity, report feeling less self-aware, and emerge feeling happy and fulfilled (Nakamura & Csikszentmihalyi, 2002).

Csikszentmihalyi's establishment of this concept stemmed from his interviews with highly talented individuals in various fields. Experienced mountain climbers described this state as flow, but other interviews found commonalities in the state with artists, chess player and athletes (Csikszentmihalyi, 1997; Nakamura & Csikszentmihalyi, 2002).

Not long after the publication of his research, the flow construct was applied to education by Hektner working alongside Csikszentmihalyi in *A Longitudinal Exploration of Flow and Intrinsic Motivation in Adolescents* (1996). From this work forward, it became common to use items from the flow scale to determine engagement in learners. Indicators of flow may be used for engagement even if they do not directly indicate a powerful flow state, in which Csikszentmihalyi admits may only be experienced by individuals several times in their lives (1997). Using the flow scale, Shernoff, Csikszentmihalyi, Schneider, and Shernoff examined over five hundred high school students across the nation and examined engagement from this perspective by subject matter, student-level demographics and pedagogy occurring during classroom lessons (2003). They used flow scales to determine engagement of students in specific types of classes and during certain times of day, collecting the data in real time using beepers and forms that required students to track their own engaged feelings, thoughts, and actions at random intervals in school over two weeks (Shernoff et al., 2003). This observation

technique is called the Experience Sampling Method (ESM) and is commonly associated with flow research (Shernoff et al., 2016). According to scholars of flow psychology, the ESM is well suited for engagement research as it helps capture in the moment experiences of learners (Shernoff, 2012).

When flow-based scales are applied to student engagement, they measure along dimensions of *concentration*, *interest* and *enjoyment* (Shernoff & Schmidt, 2008; Shernoff, 2012). Flow studies typically have students report on their experiences along these three sub-categories to determine overall levels of engagement that can be broken down more specifically (e.g. Shernoff & Schmidt, 2008). Study of engagement by academics in the flow tradition have been productive over the past two decades. They have shown that students find elective courses and social studies more engaging than others (Shernoff et al., 2003). They found cases where minority students reported higher levels of engagement than their peers (Shernoff & Schmidt, 2008), and used student-centered pedagogies to impact overall student engagement in experimental classrooms (Turner et al., 1998). The use of flow scales to define engagement continues (Shernoff, et al., 2016), though generally through the work of a unified camp of researchers (Azevedo, 2015).

Boekaerts (2016) offered insight in response to the use of flow scales in relation to engagement research. She claimed flow is more a descriptor of a specific type of engagement rather than an exact proxy, as it has been used by scholars from this tradition. Eccles (2016) saw the approach as a complementary one, noting that *concentration*, *interest*, and *enjoyment* align with other dimensional components of other models (i.e., ABC Model).

Theories of motivation and learning. Azevedo (2015) explained that flow theory is not the only outside construct used to define student engagement, but other theories within

motivational psychology are incorporated as well. One well-established motivational construct used in engagement research is Self-regulated learning. Self-regulated learning (SRL) consists of processes of forethought, monitoring, and reflection on the part of the learner (Zimmerman, 2000). A highly self-regulated learner thinks about his own learning and is an effective manager of his learning-related resources (Zimmerman & Schunk, 2001). Because of the reflective and active thought processes included in SRL, many have either suggested possible overlap or convergence between student engagement and SRL (Jarvela et al, 2016). Others have argued that SRL processes may be included in specific sub-components of different types of engagement (Boekaerts, 2016; Fredricks et al., 2004). Students exhibiting high SRL are able to effectively motivate themselves, set goals, seek help, and assess their own progress (Zimmerman & Schunk, 2001). Parts of this may look very similar or indeed synonymous with engaged learning (Eccles, 2016).

Because of these commonalities, researchers like Jarvela et al. (2016) integrate SRL with engagement. In this study, the team used the SRL tradition to define the core processes of *collaborative engagement*. They concluded engagement is characterized through cognitive and socio-emotional interactions between learners and one another and learners and the instructor—drawing on the socio-cognitive traditions of SRL. Ryu and Lombardi (2015) used SRL techniques to define engagement through analysis of student discourse and social networks. They do not approach engagement as an individual process, but instead look at engagement as “ongoing participation in the creation of socially defined, distributed knowledge” (p. 73).

In her critique, Boekaerts (2016) warned that a combination of SRL and engagement is unfounded. She insisted that scholars must make a distinction between these two constructs, though they might be seen as “parallel paths with interconnecting side paths” (p. 81). She

strongly advised against a blurring of the lines between SRL and engagement and called for more research on how the two constructs connect and affect one another.

A study of engagement has been approached through other motivational traditions too. Renniger et al. (2015) used interest theory to define engagement as the active pursuit of interest in a learning activity. Though they noted similarities and differences between the two constructs, they ultimately collected observational data of students' interest triggers and used this information to make a case for how students can be better engaged. The Demand-Resource Model, a theory proposed by industrial-organizational psychologists, was used as the framework in Salmela-Aro, Moeller, Schneider and Spicer (2016) to define engagement as an experience that incorporated levels of (1) energy, (2) dedication, and (3) absorption. They then used these three components to measure engagement in high school students. Miller (2015) drew from frameworks traditionally incorporated in reading comprehension literature to track student eye-movement while reading text and then used the data as a way to address levels of student engagement with text. These examples represent just a few of the ways scholars from outside spheres of research approach engagement through their own lens (Azevedo, 2015; Eccles, 2016).

In all of these cases, the applied lenses derive from the study of constructs usually considered as separate from engagement (Azevedo, 2015). While the teams do not always employ outside frameworks as complete proxies for student engagement, the works represent just a few of the paths researchers take to understand it in educational settings. In terms of understanding how engagement is discussed in the literature, it must be understood that scholars continue to use varying constructions for it- even after repeated calls (Appleton et al., 2008; Jimerson et al., 2003; Fredricks et al., 2004) for theoretical unification and synthesis.

It is important to keep a few things in mind when considering these methods as viable approaches. First, each is generally constricted to a few individual researchers or a particular camp within the field (Azevedo, 2015). Second, I believe it to be unlikely that school-level practitioners would have much explicit exposure to these theories, as many are specialized even within educational psychology. It has been noted that sometimes teachers feel educational research to be too theoretical (Bevan, 2004; Beyoglu, Ozer, & Ugurlu, 2010), and narrowly tailored theoretical approaches like these employ a great deal of insider-talk which is difficult for teachers to access (Bevan, 2004). However, the inclusion of multiple models of engagement in the planning for this project helped inform the coding and analysis of trends in data during the study- especially if teachers' responses did not neatly align with the more dominant theories on engagement.

Specific Theories of Engagement

Roger Azevedo (2015) concluded that “engagement is one of the most widely misused and overgeneralized constructs found in the educational, learning, instructional, and psychological sciences” (p. 84). While he may have a point in that diverging approaches to the theory are still commonplace in today's study of engagement, emerging frameworks dedicated to the study of it as an independent construct have begun to form (Fredricks, Filsecker, et al., 2016). While these autonomous theories still vary from one another, specific trends can now be seen that were not present before the National Research Council's (2004) call to action. Despite a great deal of debate, scholars are making determined steps to greater clarity in regards to the idea and definition of student engagement (Eccles, 2016).

The Schlechty Model. One model for engagement that has begun to gain traction in both practitioner and scholarly circles derives from the work of Phil Schlechty and the Schlechty

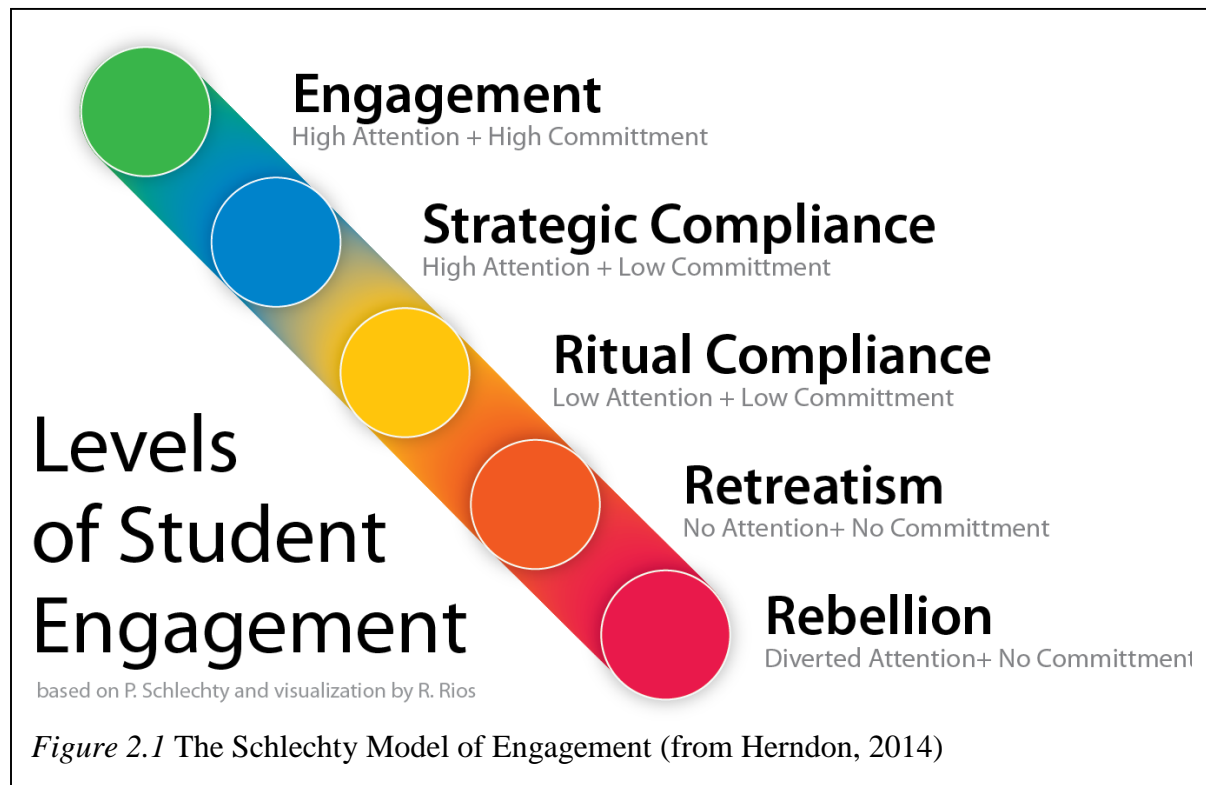
Center, an organization describing itself as “a private, nonprofit organization committed to partnering with school leaders across the country to transform their classrooms, schools, and school districts into engagement-focused organizations” (Schlechty Center, 2016). By including this practice-facing model within the review of literature for this work, I was able to support the goal of bridging the research and practice gap within the interpretation of findings. Schlechty has written several books about school improvement, and though he passed away in January of 2016, the center continues to host frequent conferences on engaging learners and supporting schools (Schlechty Center, 2016).

The inclusion of this model shows my hand as both a practitioner as well as researcher. In the past two years, two separate special edition issues of educational research journals (one in *Educational Psychologist* in 2015 and one in *Learning and Instruction* in 2016) have been devoted to the discussion of engagement in the mainstream literature. The Schlechty model was not referenced in any of the articles of either issue; however, I have encountered it numerous times as a teacher and teacher-coach during practitioner-focused conferences, trainings, and discussions. The absence of the model in both journals suggests that it is not a part of the student engagement dialogue of educational psychologists, while its presence in the field indicate that the Schlechty model is travelling in teacher-education circles. A quick twitter search of “Schlechty” reveals multiple posts by teachers, teacher-coaches, and instructional designers touting the model’s utility. It has been said in regards to the study of education, research and practice are sometimes two different worlds, separated by distinct walls and barriers (Bevan, 2004). The Schlechty model—while not a complete renegade in research—falls more on the practice side of the wall, as suggested by its lack of reference in both journals and the majority of scholarly conversation surrounding the construct. The approach of the Schlechty Center is in

many ways opposite to that of the rest of the researchers on engagement. It is practitioner focused and oriented—adept at packaging and disseminating its ideas, but putting less focus on published research in the form of individual scholarly studies and publications. Because this study focuses on how master teachers understand engagement, the inclusion of the model was necessary for this review.

The model used by the Schlechty Center looks at student engagement as a more consistent state across learning experiences, and labels levels of engagement on a continuum of attention and commitment. The model proposes five levels of engagement: (1) Engagement, (2) Strategic Compliance, (3) Ritual Compliance, (4) Retreatism, and (5) Rebellion (Saeed & Zyngier, 2012; Schlechty, 2011). Engagement occurs when students are paying attention and committed to the same learning goals as the teacher; generally the goal would be transfer of content knowledge and understanding of the topic. Strategic compliance occurs when students are highly attuned to the lesson, but not committed to the same learning goals as the teacher; for example, a student might be paying close attention or working hard in class to get a good grade or to avoid the teacher's redirection. Ritual Compliance occurs when students have low attention and commitment simultaneously; they are going through the motions in class without much physical or mental attenuation, nor are they committed to the learning goals. Retreatism occurs when there is a lack of attention and commitment—these would be students who are taking no part in the lesson or learning at school. Rebellion occurs when student attention is actively applied to a situation or goal in contradiction to the lesson showing a complete lack of commitment. Rebellious students, according to the model, do not value the learning objectives at all and are actively moving towards another task like disrupting the class, talking to friends, or

forcing the lesson off track (Saeed & Zyngier, 2012; Schlechty, 2001). A diagram created by one of the school districts associated with the center is presented in Figure 2.1.



This conceptual basis for this model stems from Schlechty’s experience as an educator and consultant for schools (Schlechty, 2011). This practitioner-oriented stance may be why a neighboring school district to the division selected for this study uses the Schlechty model in its formal observational tool (Herndon, 2014). The model is used in educational research, but usually in literature for more classroom-focused subjects like educational gaming design (Dickey, 2005), teacher education (Zyngier, 2008), and instructional design (Bowen, 2003). While many in educational psychology may not have heard of the Schlechty Model—it is not present in any of the commentaries on the field in the past two years (Azevedo, 2015; Boekaerts, 2016; Eccles, 2016; Sinatra et al., 2015)—it is possible that teachers have been trained using this model. The goal of this study was to determine how teachers, not researchers, conceptualize

engagement and develop this knowledge. It also sought to align these with existing frameworks of the construct. Because of this desire to fully understand, interpret, and communicate the teachers' theories of engagement, a clear understanding of Schlechty's work was absolutely necessary as it stands as the most practitioner-oriented framework.

The ABC Theory of Engagement. In 2004, Jennifer Fredricks, Phylis Blumenfeld, and Alison Paris conducted a critical review of the literature surrounding student engagement. This piece synthesized the ways engagement had been measured and defined by educational psychologists. While they acknowledged that “the attempt to conceptualize and examine portions of the literature under the label ‘engagement’ is potentially problematic” (p. 60), they made a strong case for the potential of the construct to have major impact on teaching and learning (Fredricks et al., 2004). Fredericks and her colleagues (2004) called for a paradigm shift in regards to the conceptualization of student engagement. From this work, it was determined that overall student engagement should be viewed as a multidimensional construct, consisting of three separate types of engagement (Fredricks et al., 2004).

The first type of engagement is *affective* (or emotional) *engagement* (Fredricks et al., 2004; Fredricks, 2012). Affective engagement measures a student's emotional response during school activities. Students who are highly affectively engaged have positive emotional reactions to instruction, teachers, peers, and their school. They tend to enjoy the experience of learning within the given context (Fredricks et al., 2004; Fredricks, 2012). An affectively engaged student may enjoy class because he likes the teacher, or finds the content interesting. Researchers use the term affective and emotional interchangeably (Fredricks, Filsecker, et al., 2016). For the purpose of this study, the term *affective* is used to complete the “ABC” acronym which is easier to communicate in practice.

Behavioral engagement has been the most studied type of engagement (Conner & Pope, 2013; Fredricks et al., 2004; Parsons, Newland & Parsons, 2014) mostly due to the fact that behavioral indicators of engagement are the simplest to measure (Fredricks, 2014). This encompasses a student's propensity to participate in activities in school, from instruction to homework, and even extracurricular activities (Fredricks et al., 2004). Behaviorally engaged students complete required tasks and actively participate in class (Marks, 2000). An example of a behaviorally engaged class would be a group of science students who follows all lab procedures throughout the lesson (Fredricks, 2014).

The final component is *cognitive engagement* (Fredricks et al., 2004). This encompasses a student's internal dispositions to see relevance of learning to future goals and cognitively strive towards mastery of difficult skills (Fredricks et al., 2004; Fredricks, 2014). A cognitively engaged student in a math class might view the study of percentage as important, because she is starting to go to restaurants with her friends and wants to correctly determine the tip (Fredricks, 2014). Fredricks notes the relationship of cognitive engagement to existing constructs like goal-orientation and self-regulation (Fredricks, Filsecker, et al., 2016), an overlap that is leveraged by some researchers (Jarvela et al., 2016; Ryu & Lombardi, 2015) and seen as detrimental according to others (Boekarts, 2016). Students who are cognitively engaged value school work and make it a priority (Fredricks et al., 2004). Together, affective, behavioral and cognitive engagement serve as subsets of overall student engagement, providing a richer and more encompassing model that explains student interest and investment towards educational processes (Fredricks et al., 2004).

Fredricks' 2004 model for student engagement is either accepted or, at the least, acknowledged in the majority of works within the literature (Ryu & Lombardi, 2015). It is,

without a doubt, the most widely accepted approach to engagement—a fact that has been echoed in many recent works (Eccles, 2016; Fredricks, Filsecker et al., 2016; Ryu & Lombardi, 2015; Shernoff, 2016; Wang et al., 2016). It has also become commonly accepted that engagement is multi-dimensional (Eccles, 2016; Fredricks, Filsecker et al., 2016), and should not be tracked by a single measure or sub-component (Wang et al., 2016). In regards to these two trends, the 2004 piece was a success—most researchers see engagement as multi-dimensional and most recognize the prevalence of the ABC model as a dominant construction for the term.

The Fredricks model is sometimes called a *tripartite model* (Appleton et al., 2008) or a multidimensional model for engagement (Fredricks et al., 2004), but Jennifer Fredricks rarely uses a single name for this. This practice holds true even in a book explaining the model to teachers (Fredricks, 2014); throughout the work, Fredricks simply calls it a “multidimensional model”. The failure to adopt a single name for the theory, though seemingly trivial, is a mistake. It makes discussion and critique of the framework more difficult and unclear. In 2014, the practitioner-oriented journal *Phi Delta Kappan* published an article by an associate professor and his two doctoral students about the Fredricks model. Called “The ABCs of Student Engagement”, this article referred to Fredricks’ construction as an “ABC Model” (Parsons, Nuland, & Parsons, 2014). Giving the framework the *ABC* title helps in two ways. First, it gives a consistent name for the model, so that it can be critiqued, compared, discussed, and disseminated. Second, it encapsulates the theory into an easy to remember framework that can easily be adopted in educational practice, helping to bridge the research-to-practice gap for student engagement (Hammersly, 2000). Because of this, I have taken the liberty of using the ABC Model, a term coined by Parsons and colleagues in 2014, throughout the work.

Applications of ABC Theory. Since 2004 piece, researchers have adopted and utilized the ABC model in the research (Fredricks, Filsecker et al., 2016). For example, Conner and Pope (2013) adapted an earlier scale from Marks (2000) which measured combined behavioral and affective engagement to see overall engagement in students. By adding a cognitive measure to the scale, Conner and Pope surveyed over six-thousand high school students from high achieving high schools, and sought to find if they were “fully engaged” (showing high levels on all sub-processes) according to the ABC model. They found that only 31% of students were fully engaged, but those that were cheated less, had higher GPAs and suffered from anxiety less than students who were not. They also used the theory to create a matrix of students depending on which types of engagement they reported; for example, students who were only behaviorally engaged were deemed “busily engaged” while students who reported high affective and cognitive engagement only were called “mentally engaged” (2013).

Reed and colleagues (2012) created and validated an instrument measuring each subscale of engagement from the ABC and used them to predict adolescent perceptions on college and future careers. Other scholars have broken down the subscales of each type of engagement and examined the predictive nature of one type toward another (i.e. “Does early affective engagement predict later cognitive engagement?”) (Li & Lerner, 2013). It has been shown that while each construct generally holds together as an independent factor, dimensions of engagement can predict and correlate with one another (Li & Lerner, 2013). For example, in online learning environments, students exhibiting high behavioral engagement were likely to also show high levels of cognitive engagement (Lin & Tsai, 2012). Because the model is multidimensional in nature, it lends itself to examination of how one sub-component might influence or interact with another.

Other works attempt to elaborate upon specific sub-processes, by focusing only on affective, behavioral, or cognitive engagement. In 2014, Chi and Wylie looked to see what sort of classroom activities supported cognitive engagement specifically- while recognizing its place in an overall ABC model. Not only do they identify certain strategies targeted toward cognitive engagement—support of learner self-talk and concept mapping are two major methods, they break levels of student cognitive engagement into a continuum that includes passive, active, constructive, and interactive cognitive engagement in learners (2014). Likewise, behavioral engagement has been a focus of specific study. In 2007, Downer, Rimm-Kaufman, and Pianta charted behavioral engagement of third graders, and found that small group work was more effective in engaging students behaviorally. Neither of these two works (Chi & Wylie, 2014; Downer et al., 2007) included a study of the other two sub-processes, but both works pulled from the Fredricks model as a guiding framework for a more targeted inquiry focused on a single dimension of engagement.

Fredricks has not been inactive since taking lead on the pivotal piece outlining the ABC model in 2004 (Fredricks et al.). She recently published a work for practitioners outlining her theory and combining it with activities, scenarios, and discussion points in a text designed for teacher education courses or professional development (Fredricks, 2014). In 2016, in addition to serving as the editor of the *Learning and Instruction* special issue on engagement (Fredricks, Filsecker et al., 2016), Fredricks published a qualitative study with colleagues collecting teacher and student understanding of student engagement in math and science courses (Fredricks, Wang, et al., 2016). She then was part of another team who used the qualitative work to support a survey measure for engagement in the two domains (Wang et al., 2016). The 2016 project took a qualitative approach while relying heavily on the ABC model as its theoretical framework

(Fredricks, Wang, et al., 2016). They found that answers provided by teachers and students aligned closely with the ABC framework- helping to further make the case for the construct's validity as a useable model of engagement (2016). The follow-up study (Wang et al., 2016) made the case for the ABC-based measurement and its validity and psychometric functioning through use with high school and middle school students.

This work by Fredricks, Wang, et al., (2016) is of special importance to this research proposal. In this qualitative inquiry, the team explains that its goal is to “gain an ‘on-the-ground’ perspective of student engagement and disengagement to determine whether prior research matches teachers’ and students’ perceptions and conceptualizations.” (p. 7). It also noted that “investigating teachers’ and students’ conceptualization of engagement is also important for developing a measure that reflects the everyday language that teachers and students use around doing tasks and learning” (p. 6). They ask participants three major questions: “(1) what does engagement mean to you; (2) what do students do when they are engaged in math and science; and (3) what influences student engagement and disengagement in math and science” (p. 7). According to the authors, the work is especially important because there has been a lack in qualitative study of student engagement (2016).

Overall the ABC framework has become a well-acknowledged, though not universally-accepted, theory for a construct (Azevedo, 2015). The existence of multiple, and sometimes competing, models in engagement has been noted by scholars time and time again (Azevedo, 2015; Appleton et al., 2008; Fredricks et al., 2004; Jimerson et al., 2003; Sinatra et al., 2015). However, the majority of the field agrees that engagement is a multidimensional construct (Boekaerts, 2016), and the work of Fredricks and the ABC model are the driving force behind the belief in a model of engagement that includes sub-components (Eccles, 2016). However, not

all scholars stop their construction at *affective, behavioral, and cognitive* engagements. Since Fredricks et al. (2004), researchers have used the ABC model as a launching point for additional dimensions for the construct (Fredricks, Filsecker, et al., 2016; Jang et al., 2016) .

Dimensions added to the ABC Model. Few have critiqued the ABC model for being too *inclusive*—rarely, if ever, do opponents of the theory call for a single-dimensional approach (Azevedo, 2015). Scholars have, however, made the case for *additional* dimensions for the meta-construct (Reeve, 2013). Some of the most common additional “types” of engagement are *agentic engagement, social engagement, academic engagement* and *psychological engagement*.

Agentic engagement. The leading scholar in proposing agentic engagement is Johnmarshall Reeve of Korea University (Sinatra et al., 2015). In a study outlining this aspect of student engagement, Reeve defines agentic engagement as “student’ constructive contributions into the flow of the instruction they receive” (Reeve & Tseng, 2011, p. 258). For example—during a world history lesson, a Hindu student explains how his family celebrates holidays, or in an algebra lesson, a group of students ask the teacher if they can receive another practice problem, because they still do not understand quadrants. These behaviors help shape and influence the delivery of the content (Reeve, 2013). Agentic engagement is rooted in a constructivist approach to engagement (Reeve & Tseng, 2011); the students are not just receivers of the instruction, they are co-creators in the process. Their actions and reactions influence the teacher’s, whose delivery and approach are not altered by the students themselves (Reeve, 2013). As Reeve and Tseng believe “current conceptualizations of student engagement that emphasize only students’ behavioral, emotional, and cognitive involvement fall short of capturing the extent to which students contribute agentially into the on-going flow of the instruction they receive” (2011, p258). Reeve has conducted several studies using self-report surveys and structural

equation modeling to suggest that agentic engagement is independently variant of affective, behavioral, and cognitive engagement (Reeve & Tseng, 2011; Reeve, 2013).

Social engagement. In 2010, Linnenbrink-Garcia, Rogat, and Koskey sought to add *social-behavioral engagement* as a fourth dimension. For Linnenbrink-Garcia and colleagues, social-behavioral engagement explains student engagement related to classroom participation. They note that, especially in small group instruction, students may choose to engage in or withdraw from collaboration or student-to-student participation. The team uses the construct of social loafing (a reduction in participation of individuals when placed in a group) to help support this dimension (2010). When witnessing a group of students working together on a science lab, for example, a teacher might see several students taking the lead while others sit back and allow their classmates to drive the work. The team measured these interactions quantitatively by placing students in small groups for a 30 minute learning task and giving them a survey to measure their social-behavioral and affective engagement, they then followed up with qualitative interviews of the students about the experience. Though they found various relationships between the social-behavioral and affective scales, no additional factor analysis or modeling was conducted to test for overlap or independence in relation to affective, behavioral, or cognitive engagement (Linnenbrink-Garcia et al., 2010).

Fredricks herself has even included a similar fourth dimension of *social engagement* in certain works. In the study by Wang, Fredricks, Ye, Hofkens, and Linn (2016), Wang and Fredricks built off their qualitative work (Fredricks, Wang, et al., 2016) suggesting through the the potential presence of social elements in the construction of engagement for teachers and students. Based on their interviews, Wang and Fredricks elected to include social engagement as a fourth factor on a scale to measure overall student engagement in math and science classes

(Wang et al., 2016). Indicating items for this dimension include “I build on others’ ideas”, “I try to work with others who can help me in math/science”, and a reverse-coded “I don’t care about other people’s ideas” (p. 12). When one of the major advocates for the ABC model includes a fourth dimension in a recent study, it lends a great deal of weight to the possible inclusion of other subscales. However, the team explained their belief is that “social engagement represents a promising construct to develop further... an important question is whether social engagement is indeed a distinct dimension of engagement” (p. 12). They go on to call for the necessity for future research to determine whether exactly social interaction is a *part of* engagement or a *moderator for* engagement.

Psychological and Academic Engagement. In an attempt to create a viable measurement tool for overall student engagement, Appleton and colleagues (2006) theorized a multidimensional model similar to the ABC, but instead included dimensions of *academic* (not affective), *behavioral*, *cognitive*, and *psychological* engagement. In this case, academic engagement was defined through tasks relate to school success like total graduate credits earned and homework completion. Behavioral engagement was measured through report of classroom participation and attendance. Cognitive engagement shared a similar construction to its counterpart in the ABC model- measured by perceived relevance of school world and self-regulative factors, while psychological engagement was associated with a sense of belongingness with peers and teachers. These factors were tested through both exploratory and confirmatory factor analysis and showed some evidence of uniqueness and independence (Appleton et al., 2006), but the most recent publications on engagement showed little evidence of wide scale adoption of this four-part model as a framework outside of the SEI.

These four additional dimensions of engagement represent novel directions and ideas scholars apply to the overall conceptual understanding of student engagement. In examining them, it is worth considering perhaps changing the ABC model to an *AABC* model that includes agentic engagement, or an *ABCP* model that included psychological engagement. Fredricks includes a discussion of several of these additional dimensions (including social and agentic engagement) in her review of the field in 2016 (Fredricks, Filsecker, et al.). She limits her discussion of these dimensions to a single sentence: “Further research is necessary to determine the extent to which these are unique dimensions of engagement” (p. 2). Others agree that a key piece of future work in the study of student engagement is to determine just exactly what is and what is not a part of the construct (Azevedo, 2015; Boekaerts, 2016; Eccles, 2016). In my own appraisal of the addition of new dimensions to engagement, I cannot help but draw parallels to intelligence theory in psychology with the construction of multiple intelligences through the work of Howard Gardner (1993). Just as Gardner started with eight separate types of intelligences and then continued to add on to his theory with new intelligence types, engagement theory runs the risk of triviality (Klein, 1997). If engagement theory is going to be used to help support teaching and learning (NRC, 2004), it must be useable and clear (Fredricks et al., 2004). This may be one of the reasons why practitioners have discovered a non-research oriented construction like the Schlechty Model. Debate is healthy and adjustment of framework may very well be necessary (Azevedo, 2015), but if any additions arise, they should at least come from rich data collection. As of now, much of these additional dimensions come from separate theoretical traditions attempting to include their ideas into an overall model of engagement. (e.g. Reeve and social-constructivism). The presence of many different voices in theorizing of

engagement may not be wholly unproductive, but it also may be a large part of why engagement theory is still having difficulty unifying under a common model.

Other issues within the field. So far with this review I have given an overview on engagement theory by: (1) examining models of engagement that draw from outside constructs including flow, SRL, and motivational psychology, and (2) explaining the dominant construct-specific models for engagement including the Schlechty model, ABC model, and additional dimensions of engagement since Fredricks et al. (2004). Included in this discussion is a consistent cry that engagement is malleable (Eccles, 2016; Fredricks et al, 2004; Marks, 2000; Shernoff, 2012), and positive outcomes are associated with engagement (Conner & Pope, 2013; Shernoff et al., 2003; Wang et al., 2016). Despite the promise of these first two claims, I have shown engagement research to be messy and characterized by a variety of constructions and definitions for the term (Appleton et al., 2008; Azevedo, 2015; Boekaerts, 2016; Fredricks, Filsecker, et al., 2016). Before moving towards a concluding theoretical framework for this project, there are two other issues that must be included in the discussion of engagement: the debate surrounding *disengagement* in the research and the methods in which scholars study engaged learning.

Disengagement. Fredricks' initial 2004 review includes the term *disengagement* throughout the work (Fredricks et al.). It is used to explain a lack of a certain type of engagement—i.e. “several studies show that behavioral disengagement is a precursor of dropping out” (p. 72). Most of the field before Fredricks, and still many researchers today view disengagement in a similar manner: disengagement equals low levels of student engagement (Fredricks, Filsecker et al., 2016). Fredricks kept with this line of reasoning throughout her book for teachers, titled *Eight Myths of Student Disengagement* (2014); the idea of disengagement as

the lowest end on a spectrum or continuum of engagement is common (Fredricks, Filsecker et al., 2016). However, other scholars of engagement have begun to question whether or not disengagement is its own distinct construct (Azevedo, 2015), which leads Fredricks to explain:

In most studies, engagement and disengagement are viewed and measured on a single continuum, with lower levels of engagement indicating disengagement. However, some researchers have begun to view engagement and disengagement as separate and distinct constructs associated with different learning outcomes. (Fredricks, Filsecker, et al., 2016, p. 2)

Just as most works on engagement include a defense of their particular framework used to define the construct, many recent studies also feel the need to explain their views on disengagement at the outset of the study (e.g. Jang et al., 2016; Salmelo-Aro et al., 2016; Skinner, Furer, Marchland, & Kinderman, 2008).

For example, Jang, Kim, and Reeve (2016) view engagement and disengagement as dual processes, and believe that students tend to travel along one trajectory or the other over time. For them, disengagement is not simply the lack of engagement, it is its own state with “its own unique set of antecedents and outcomes” (p. 28). Some of these antecedents for disengagement are student perceptions of instruction, levels of frustration, and level of autonomy during instruction. The resulting behaviors might be students pretending to work rather than actually completing tasks, feelings of anxiety during instruction. They use confirmatory factor analysis on scales measuring four types of engagement (*affective*, *agentic*, *behavioral*, and *cognitive*) and corresponding scales for disengagement along each dimension (Jang et al., 2016). Their results suggest that engagement and disengagement can stand alone, but their scales still suggest a continuum approach. For example, the behavioral engagement scale includes an item that says “I try hard to do well in this class” while the behavioral disengagement scale has an item saying “I don’t try very hard in this class” (p. 31).

Fredricks and colleagues included disengagement as a major part of their two-study 2016 work (Fredricks, Wang, et al., 2016; Wang et al., 2016), expecting the two constructs to be separated clearly during interviews. They asked teachers and students to describe engagement and disengagement independently. The team then used the data to create a survey instrument for engaged and disengaged learning. The researchers approached the study with an expectation that disengagement would be a unique construct, however they admitted their findings do as much to support the idea that disengagement is simply the absence of engagement as it does an independent construction for disengaged learning (Fredricks, Wang, et al., 2016). As a result, their final survey instrument includes little consideration to disengagement, especially when compared to Jang et al who use separate scales for engaged/disengaged learning at four different dimensions (2016).

Other works operate under the assumption that disengagement is something entirely independent and unique (Salmelo-Aro et al., 2016; Skinner et al., 2008), but it does not appear that the majority of the field is ready to follow suit and separate engagement and disengagement from one another conceptually. While works are able to identify some characteristics that apply to disengagement that are not the exact opposite of engaged behaviors—sleeping in class has been categorized as a disengaged-only behavior by Jang et al. (2016), many agree with Boekaerts (2016) who states “I am not yet convinced that disengagement is the conceptual opposite of engagement.” Eccles (2016) supports the claim that clear and careful theorizing needs to occur to help parse out differences between engagement and disengagement.

This study will operate under the assumption that disengagement only describes a very low level of engagement from students, because this belief has been supported the longest by the literature (Fredricks, Filsecker, et al., 2016), and because a clear explanation of a unique

construction of disengagement has yet to become mainstream in the field (Eccles, 2016). In addition, the overall goal of the work is to determine how master teachers define and understand engagement, so any discussion by teachers of disengaged learning would mostly come from an explanation of what engagement *is not* in an attempt to better communicate their ideas.

However, a recognition of the engagement-disengagement debate in the research community helped inform the analysis of responses for this study in the event that they included a great deal focus on disengagement. More qualitative work concerning this possible dichotomy should also be considered in future studies (Wang et al., 2016).

Measurement of Engagement. The last common factor among engagement researchers is a discussion surrounding how the construct can be measured. Because the present study focused on how teachers conceptualize engagement rather than measure actual levels of engaged learning, I am not exhaustive in this discussion. I did however use classroom observations to collect data of engaged learning in the participants' classrooms, so a look into how other have measured engagement in the past was necessary. In a 2012 review of the literature concerning engagement and measurement Fredricks and McColskey identified five major methods used by scholars to measure levels of engagement in students. They are: (1) student self-report, (2) experience sampling, (3) teacher ratings of students, (4) interviews, and (5) observations. Student self-reporting is, by far, the most common methodology used in engagement research according to Fredricks and McColskey (2012) and others (Azevedo, 2015; Jimerson et al., 2003; Appleton et al., 2008). Typically students are given a one-time survey, and are asked to describe their experience in the classroom (Fredricks & McColskey, 2012); these surveys are generally multi-dimensional and correspond to whatever framework for engagement is being used by the researcher (Azevedo, 2015). The ESM is mostly used by flow researchers, and combines self-

report with random interval data collection (Shernoff et al., 2003). Teacher ratings of students require the practitioners to rate engagement levels of their students on paper; these are often used in conjunction with student-self report in an attempt to find richer data (Skinner et al, 2008).

According to Fredricks and McColskey (2012), the final two methods for determining student engagement are interviews of students and observation of classrooms. Only a handful of studies have used interview data to measure student engagement (Azevedo, 2015; Fredricks & McColskey, 2012); Fredricks and McColskey count only five at the time of their review in 2012. For most of these studies, interviews are used in conjunction with self-reported survey methods (Blumenfeld et al., 2005; McCaslin & Good, 1996). Another work by Turner and Meyer (2010) examined student engagement through interview data, but only as a small part of an overall discussion of school context for middle-schoolers. Though it has been argued that engagement research has been limited by taking only one, predominantly quantitative, approach (Azevedo, 2015), the use of interviews to study student engagement is rare (Fredricks et al., 2004; Fredricks & McColskey, 2012).

Azevedo (2015) commented on the traditional methodology of engagement research and asserted observation is “a traditional technique of measuring engagement” (p. 85). Fredricks and McColskey (2012) believe that “the prime advantage of using observation techniques to study engagement is that they can provide detailed and descriptive accounts of the contextual factors occurring with higher or lower engagement levels” (p. 767). Classroom observations are usually paired with interviews of students or teachers, or self-reported surveys in engagement research (Azevedo, 2015; Fredricks & McColskey, 2012; Helme & Clarke, 2001). For example, Helme and Clarke (2001) videotaped eighth-grade math classes and use the coded observation data to inform interviews of the math students to determine factors impacting cognitive engagement.

The methodological practice shown by Helme and Clarke (2001) correspond to Fredricks and McColskey's claim that "observational methods can be used to verify information about engagement collected from survey and interview techniques" (2012, p. 768).

The five categories of methodologies used in engagement research proposed by Fredricks and McColskey (2012) are not exhaustive. For example, scholars have analyzed computer log files to determine when students become disengaged in online classes (Gobert, Baker, & Wixon, 2015). Others have used eye-movement tracking to measure behavioral and cognitive disengagement during reading (Miller, 2015). However, the field agrees that the dominant method used to study engagement is student self-report (Azevedo, 2015; Eccles, 2016; Fredricks, Filsecker et al., 2016; Fredricks & McColskey, 2012; Shernoff et al., 2016). Many scholars of engagement agree with Shernoff that within the field "there remains an overreliance on survey and self-report methodologies" (Shernoff et al., 2016, p.55). In addition, most of the major theorizing on engagement came from an effort to synthesize preexisting models into a multi-dimensional construct through the work of Fredricks, Blumenfeld, and Paris in 2004 (Eccles, 2016). Basically, the field develops a framework for engagement in the abstract, as seen with the Schlechty Model (Schlechty, 2011) or ABC Model (Fredricks et al., 2004), and then uses self-report data to test the theory (Azevedo, 2015; Fredricks & McColskey, 2012). Though this study did not seek to directly measure student engagement, I did compare teacher's conceptualization to the field's, and it was important to know that much of the research on engagement is based on student self-report (Fredricks & McColskey, 2012). This practice is likely one of the primary reasons so many different constructions exist. Fortunately, the ABC framework, though it has its critics (e.g. Reeve, 2013), has been used in studies implementing various methodologies,

including qualitative interviewing (Fredricks, Wang et al., 2016), classroom observations (Blumenfeld et al., 2005), and teacher report (Wigfield et al., 2008).

The ABC Model as a Pragmatic Solution in Engagement Research

At this point I have identified several issues within engagement research at large, including the presence of many competing theories (Azevedo, 2015), a debate over the nature of disengagement (Eccles, 2016), and the reliance on self-report in research methodology (Fredricks & McColskey, 2015). With all of these competing theories within this field, how can the case be made for one construction over the other? Though discrepancies continue to exist, the theory that offers the best overall model to date is Fredricks' original proposition of engagement as seen through *affective, behavioral, and cognitive* dimensions (Fredricks et al., 2004).

The first reason for this adoption is the fact that the Fredricks model has become the most widely accepted framework in the field. Shernoff acknowledges that the ABC model is “widely embraced” with “increasing agreement” by researchers (Shernoff, et al., 2016, p. 53). Similar assertions are made by others (Boekaerts, 2016; Eccles, 2016), even when proposing alternative definitions or dimensions for engagement that vary from the ABC model (e.g., Ryu & Lombardi, 2015; Sinatra et al., 2015). The use of the ABC model may be contested by some researchers of engagement, but its adoption would not be considered fringe, unexpected, or unjustified.

The ABC model also tends to fit a “goldilocks principle” in its format; it is not as restrictive as a one-dimensional model, but it also is concise enough to explain the term without a large number of subscales. The tripartite ABC model has been shown to have better predictive ability in relation to academic achievement than a one-dimensional measurement of overall engagement (Steffansson et al., 2016), but it still affords useable surveys with a manageable

number of factors (Fredricks, 2014). If all proposed additional dimensions were added to the model (agentic, social, self-regulated), measurement and assessment of engagement could become difficult and unwieldy for practical use in the field. Additional dimensions also run the risk of overlapping with other constructs like self-regulation (Eccles, 2016), peer interaction (Wang, et al., 2016) or motivation (Boekarts, 2016).

Elements of competing models often align closely enough to the ABC model to suggest overall agreement among the constructions. The Schechty Model includes categories for *engagement, strategic compliance, ritual compliance, retreatism, and rebellion* (Schlechty, 2011). The ABC would be able to describe these states as well through its three dimensions. What Schechty would call “Engagement”, the ABC model (Fredricks et al., 2016) would call high engagement on all three scales (Conner & Pope, 2013). Schlechty’s strategic compliance looks much like what Conner and Pope (2013) defined as *busily engaged*—defined by high behavioral but low affective and cognitive engagement using the ABC construction. Strategic Compliance would show as a moderate level of behavioral engagement (enough for students to be semi-task oriented during instruction), but still lacking affective and cognitive engagement. The same logic can be applied to Shernoff’s measurement of engagement through flow (Shernoff, 2012). He uses three domains as well, *interest, enjoyment, and concentration*. While these do not necessarily align neatly with the ABC model, a great deal of overlap (affective engagement and enjoyment for example) exists between these models.

The ABC model based on Fredricks work has provided a productive construct to be used as a variable that successfully predicts academic achievement (Stefansson et al., 2016), dropout rates (Archambault et al., 2009) and overall sense of wellbeing in school (Lewis, Huebner, Malone, & Valois, 2011). Using a tripartite model also has led researchers to determine

classroom factors that influence engagement like classroom organization and student-teacher relationships (Rimm-Kaufman et al., 2015), and supportive classroom culture (Tas, 2016).

The current work expected to add to this body of work surrounding the ABC model of engagement by further honing this theory and determining how teachers develop their understanding of the construct. However, little work outside of the Fredricks, Wang, et al. study (one that used specific follow up questions asking teachers and students to explain how they (1) felt, (2) thought, and (3) behaved when engaged) in 2016 has been conducted to see if practitioner understanding lacks cohesion as well. Similarly, little work outside of this study has been conducted in a qualitative manner (Fredricks & McColskey, 2012; Fredricks, Wang, et al., 2016). A qualitative approach will utilize an underused method within engagement research—semi-structured interviews (Azevedo, 2015), to help add to the field’s understanding of the construct. There was no guarantee that teachers will see engagement in the same way as the Fredricks model. With this in mind, the study proceeded with the Fredricks ABC model as the guideline for its conceptual framework, classroom observations, and initial coding list, while also allowing for other constructions, whether they are based on alternate models or an entirely new framework.

The Potential of Master Teachers as Participants in Engagement Research

Much work has been conducted by scholars over the past two decades in helping to solidify the study of engagement into a conversation that uses consistent and well-theorized frameworks that can be employed in works that can expand the current understanding of teaching and learning. Though many recognize the field is far from unified (Azevedo, 2015; Boekaerts, 2016), concerted progress in engagement education has certainly been made (Eccles, 2016). Theories of engagement now exist, and can be applied to research. While it is too late for

researchers in engagement to start from the ground up completely (Azevedo, 2015), the addition of *in situ* perspectives can remedy the lack of grounded theorizing of student engagement.

Beycioglu, Ozer, and Ugurlu, examine how teachers perceive educational research in (2010) and conclude that “teachers, as the most important practitioners in educational settings, and their attitudes towards knowledge base and /or research in education are concerns for educational researchers most of whom see teachers as the object of their studies” (p.1088). While the critique may be harsh—it helps confirm the idea that researchers and practitioners often occupy different worlds (Oliver, et al., 2004). In relation to this “research to practice gap” Hammersly (2000) makes a case for the importance of educational research to everyday instructional practice. He notes that research in education has both *appreciative* and *designatory* capacity. The appreciative capacity for research occurs when teachers may learn to see neglected aspects of teaching and learning from scholars. Designatory capacity is characterized by the ability of research to help give structure and form to things teachers already know (Hammersly, 2000). As I talk with teachers in the professional world, I often see the utility of these two capacities in regards to engagement. Teachers are usually able to show an understanding of engagement, though they may not be able to articulate it as cleanly as in a research model. In addition, the use of models sometimes can help teachers recognize aspects of engagement (like cognitive factors) that may go unnoticed. By opening lines of conversation with teachers about engagement, part of the research to practice gap may be narrowed.

On the other side of the gap sits the propensity for teachers to help engagement researchers. Eccles, a consistent voice in motivational psychology for decades, offered a noteworthy perspective while reflecting on the work towards a unified theory of engagement in the early 2000s in her conclusion in the *Learning and Instruction* special issue from 2016.

My point here is that this classification system emerged from a very grounded qualitative investigation of existing measures. The classification systems [ABC model] did not emerge from a deep theoretical analysis of the concept of engagement. It grew out of a first, very concrete, and very-focused effort to systematize a rapidly growing research area- an effort grounded in psychology, reflecting well-accepted but not well-theorized categories. (p.72)

Her take on the genesis of a multidimensional student-engagement theory is an important one.

The creation of a more inclusive meta-construct was conducted by psychologists and researchers who synthesized previous work that lacked cohesion. It was *not* created through naturalistic observation, rich data collection, abstract theorizing. Nor was it developed collaboratively with practitioners.

An awareness of this history helped support the case for the potential power of the addition of teacher voices to the construct. As a teacher, I cared more about engagement than I ever have as a researcher—and I am one who has devoted the majority of my scholarly focus toward the construct. Teachers live and die by engagement; their day-to-day work is more efficient, effective, and pleasant if they are engaging their students. They also talk about engagement a great deal. When I lead professional development sessions on student engagement, I see larger crowds in attendance than when I lead ones on specific pedagogies or other theories like self-regulated learning. The answers to many of the questions asked by researchers—i.e., Which model best suits the construct?, Should agentic or social elements be considered in engagement?—may lie in the deep practical knowledge of the teachers. To build off Hammersly's theory (2000)—practice-based understanding of engagement may have its own appreciative and designatory capacities.

Expert Teachers

With a case made for the potential for teacher-voice to enhance the study of student engagement, the next question is: what group of teachers will help construct the best

environment for productive study of engagement? An argument could be presented for a focus on domain-specific content areas of teaching; qualitative interviews could be conducted with teachers of certain subjects in a method similar to Fredricks, Wang, and colleagues (2016). Current trends in the theory call for more research on domain-specific study of the construct (Azevedo, 2015; Fredricks, Wang, et al., 2016). Shernoff found that students were more engaged in some classes (the arts, vocational education, and social studies) than others (math), and similar findings have been reported in subsequent studies (Conner & Pope, 2013). While this avenue—interviewing teachers by content area—can be a productive one, it is not the only option for selecting qualitative participants in engagement research. To date, no known qualitative studies have employed expert sampling as a way to select teacher participants in engagement research.

Expert sampling, according to Trotter (2012), is “a classic ethnographic approach” (p. 427) that selects participants who exhibit extensive expertise in specific fields. It looks for experts who are nominated by others from the community, and uses their in-depth understanding to help build knowledge of a topic (Trotter, 2012). It is logical that exceptional teachers might have much to offer scholars of student engagement, but identifying expert teachers is a topic of considerable debate (Baker et al., 2010; Goe, Bell, & Little, 2008). In a synthesis of approaches to evaluating teacher effectiveness, Goe, Bell, and Little (2008) outlined several methods of measuring effectiveness including: (1) classroom observations, (2) principal evaluations, (3) analysis of classroom artifacts, (4) self-reports of teacher practice, (5) student ratings, (6) standardized test scores, and (7) value-added models. Baker et al. (2010) suggested strongly against the idea of test scores, even ones with value-added scales, as comprehensive measures of a teacher’s ability or skill. Evaluations from principals and students may also help to capture

some of a teacher's expertise in the practice, but they may just as easily be measures of likeability, popularity, or social favorability. They also could be inconsistent from one context to another; what one principal may like in a teacher, another might see as unfavorable. When I look for expert teachers in a building, I rely more often on classroom observations, analysis of artifact, and the teacher's ability to communicate their practice—all qualities in line with Goe et al.'s suggestions.

Fortunately, a rigorous process for identifying expert, or master, teachers does exist and has been the subject of a great deal of research and evaluation in the past twenty years. The National Board of Professional Teaching Standards (NBPTS) created a system in the 1980s to help elevate and promote the profession through a recognition of master teachers, who could submit work and earn the designation of Nationally Board Certified Teachers (NBCTs). The NBCT process is one of the most rigorous and consistent ways to identify master teachers, and can be used in engagement research as a way to identify an expert sample in qualitative research designed to capture practitioner views about engagement.

NBCTs

During the certification process, NBCT candidates must submit four entries to NBPTS, and these entries are reviewed by multiple assessors who conduct strict, process-driven, evaluations of the teachers' abilities (NBPTS, 2016). The entries include description, analysis, and reflection on lessons created by the teacher, as well as student artifacts and videos. Of the four total entries two include fifteen-minute videos of lessons- one shows the instructor in a whole group teaching session, while the other is of a small-group setting (both require corresponding written analysis and critique by the teacher). The third entry requires teachers to submit several stages of student work from multiple pupils, where the teachers must explain how

he or she improved the students' performance in the teacher's content domain (each area of certification is content-based, so Social Studies teachers have content-specific requirements that differ from an English teacher's for example). The fourth component requires teachers to submit documented accomplishments that show teachers to be: (1) a partner with students' families and community, (2) a learner within the profession, and (3) a collaborator and/or leader within his or her school, district, or professional community. These four entries are scored by separate reviewers (all NBCTs and certified reviewers) based on tightly constricted and pre-established rubrics created by the board and aligned with each specific entry. Finally, all teachers must take a content and age-level specific assessment that tests both their knowledge of their domain as well as appropriate pedagogical practices that correspond to their subject (NBPTS, 2016).

NBPTS supports 25 different certificate areas, specific to the teacher's discipline and developmental level. For example, there are two certificates for art teachers, one for Early and Middle Childhood (ages 3-12) and one for Early Adolescence through Young Adulthood (ages 11-18+) (NBPTS, 2014; NBPTS, 2016). Every certificate contains unique standards created by teachers identified by the board as "high accomplished", but each candidate must submit 4 components based on their certificate area, which follow the basic format outlined above. The tests for each certificate area are also based on these domain-specific standards (NBPTS, 2016).

The National Board Certification Process has been tied to multiple state-wide initiatives in hopes of improving teacher quality (Clotfelter, Ladd, & Vigdor, 2007). Some states like Colorado, Illinois, Kansas, Virginia, and many others offer compensation for NBCTs either in the form of annual stipends or a one-time bonus upon achieving certification (NBPTS, 2015). Others like Arkansas, California, and Ohio award top-tier or highest-level teaching certificates to licensed educators in their state (NBPTS, 2016). The percentage of teachers who achieve NBCT

varies from state to state with North Carolina having the highest percentage NBCT (21%) and others like Kansas and Connecticut who employ only 1% NBCT (Cowan & Goldhaber, 2016).

NBCTs impact on student achievement. In terms of overall percentage of teachers, relatively few professionals are certified by NBPTS (Cowan & Goldhaber, 2016); however, this status could simply mean that NBCTs are rare rather than elite. Especially since many state budgets either offer or have considered offering financial backing to support instructor achievement of certification, a considerable amount of research has been conducted to determine the relationship between achievement of NBCT through the NBPTS process, and effective teaching (Coltfelder, Ladd, & Vigdor, 2007). In 2007, North Carolina NBCTs were found to have higher reading and math scores on statewide assessments than non-NBCT colleagues (Coltfelder et al.). A study of Florida and Washington NBCTs found similar results using value-added modeling (Chingos & Peterson, 2011; Cowan & Goldhaber, 2016). These results have been mirrored in domain-specific, non-accreditation based tests. Ambers (2008) found that students of Board Certified health and physical education teachers scored higher on content-specific, researcher created tests, on all four out of four competencies included in the assessment. Studies of NBCTs show that their students outperform students of non-NBCTs; however, a large body of research suggests that test scores are a weak proxy for teacher effectiveness when taken singularly, even in the case of value-added models (Haertel, 2013; Papay, 2011). While it may be a good sign that students of NBCTs do not score *lower* than non-NBCTs on assessments (high-stakes, competency based, or otherwise), other measures of impact must be demonstrated in order to make any sort of case for NBCT as an identifier for *master-teacher*.

NBCTs impact on school. Fortunately, the literature on NBCT efficacy is not constricted to test-score analysis. In qualitative interviews with faculty members (both NBCT

and non-certified teachers), NBCTs were nominated by peers to be more likely to help other colleagues in developing and improving instruction. It was also found that these NBCTs informally helped a greater number of colleagues each year than non-NBCTs (Frank et al., 2008). They are also regularly identified as teacher-leaders within the school, and are more likely to help support school improvement initiatives than their peers (Loeb, Elfers, & Plecki, 2010). A review by Cannata and colleagues in 2010 confirmed this, finding that NBCTs were the most likely to engage in building level leadership projects and had great effect on “domain and activities closest to the classroom” (Cannata et al., p. 464). NBCTs report very high levels of teacher self-efficacy, and report feeling more motivated and more likely to reflect on practice than non-Certified teachers. Linda Cavalluzzo has lead several investigations to determine whether or not NBCT can serve as an overall measure of teacher effectiveness, and in each case (Cavalluzzo et al., 2015; Cavalluzzo, 2004) NBCT was determined to be a viable and reliable measurement of teacher quality. To quote the 2004 report: “These findings suggest that school systems that wish to target pay increases to teachers of the highest quality can use NBC for this purpose” (Cavalluzzo, p. 34).

Much of the research surrounding NBCTs is simply correlational, comparing NBCTs to non-NBCTs along one variable or another. Because of this, it is sometimes difficult to determine whether the relationship between NBCT and positive outcomes like higher achievement, increased participation in professional development, higher levels of collegiality, greater self-efficacy or stronger in-building leadership, is casual. Does the NBCT process itself create better teachers or does it simply identify them? One study (Park & Oliver, 2008) interviewed three groups of teachers, those who were considering certification, those in the process of certification, and teachers who had achieved NBCT. It determined that the NBCT process helped to enhance

teachers' reflective practice, supported their ability to engage in professional discourse, raised their standards of student performance, and helped to make them more collaborative practitioners. This evidence helps support the idea that the NBCT process is a transformative. Yes, all participants were from a sample that had at least considered NBCT as an option- leaving a noted level of selection bias, but differences were shown across the three groups showing that the NBCT process impacted the teachers- especially in their ability to reflect and discuss the profession.

This propensity for reflection, of all the qualities of NBCTs, was key to this study. Whereas professional developers, teacher educators, or district leaders may be concerned with the impact of the NBCT process as an opportunity for growth, it mattered little in the context of this work. What was clear was that NBCTs are good teachers. Nothing in the research or in my own experience working with teachers suggested that all great teachers are Board Certified, but there was a great deal of evidence that NBCTs are all very good teachers (Cannata et al., 2010; Cavalluzzo, 2004; Cavalluzzo et al., 2015) . While I was achieving Board Certification, I worked with many NBCTs and alongside several dozen National Board candidates. In my experience, these teachers were passionate, knowledgeable, and thoughtful practitioners. I believed them all to be very strong teachers, and while this sample is not representative or generalizable, my own observations support what the body of research is suggesting: NBCTs are high quality teachers—masters of their craft. On top of this, the NBCT process favors educators who are not only good at teaching, but are good at talking about teaching (Park & Oliver, 2008; Philips, 2008). This reflective propensity made NBCTs and excellent group of participants for qualitative inquiry that is enhanced through rich and descriptive answers to prompts (Patton, 1990). Most worthwhile conversations of student engagement, academic or practical, are going

to be messy. I needed participants who not only understand how to engage students, but also those who could identify what engaged learning looks like and how to talk about practice clearly and with insight. For this reason, along with a large body of research that carries with it great consequence in terms of statewide funding and initiatives, I used National Board Certification to identify master teachers within a district to assist in qualitative analysis of a very difficult, but important construct.

How Teachers Develop Expertise

While the NBCT designation can serve as a strong identifier for good teachers (Cannata et al., 2010; Cavalluzzo, 2004; Cavalluzzo et al., 2015) and evidence exists suggesting the certification process helps teachers to become more effective along several metrics (Park & Oliver, 2008), educators certainly develop their professional expertise from a variety of sources (Jones & Dexter, 2014; Louden, 1991; Loughran, 2010). In this work, I not only attempted to see how teachers understand student engagement, I also asked how this knowledge developed. The second research question guiding this work aimed to identify the sources for the teachers' knowledge about student engagement. This work was not the first study to question the origins of professional knowledge of teaching practice—a topic of scholastic inquiry for nearly a century (Louden, 1991). To guide my examination of sources of teacher knowledge of engagement, I focused on both *where* teachers gain professional knowledge, and *how* that knowledge develops.

For this study, I incorporated Jones and Dexter's holistic model of *formal*, *informal*, and *independent learning* (2014; 2016) to categorize and understand where teachers learn about engagement. To understand how this learning process occurs, I drew from Clarke and Hollingsworth's Interconnected Model of Teacher Professional Growth (IMTPG) (2002). While Jones and Dexter's work provides a descriptive model of types of learning activities available to

teachers, Clarke and Hollingsworth's model outlines the procedural sequence for developing and changing teachers' understanding of instructional practice.

My approach to this second research question was more inductive in nature when compared to my examination of teacher constructions of student engagement. The main goal of this line of questioning was not to confirm, refute, or develop theory surrounding the professional knowledge of teachers. Instead, I was more concerned with identifying where teachers hear about student engagement, and how they develop their own theories of the construct. Before this study, little, if anything, was known of how teachers develop their understanding of student engagement specifically. The inclusion of this framework informed sources for knowledge of engagement in analysis and showed that this work is not an island. An incorporation of related theoretical constructions for the building of professional knowledge both enriched my work within this study and helped situate it in the larger academic and professional conversations explaining how teachers, especially expert teachers, develop their mastery of the profession related specifically to the idea of student engagement.

Formal, Informal, and Independent Learning. Jones and Dexter's work (2014; 2016) stems from a desire to understand how teachers learn to integrate technology in their practice. Their model for teacher learning is also relatively new to the literature. Both facts may beg the question, why choose a new theoretical framework emerging from instructional technology literature for a study concerned with student engagement? What drew me to this model was the clearly drawn categories that encapsulate all conceivable forms of teacher learning. I still included more mainstream ideas from the field through the incorporation of Clarke and Hollingsworth's work (2002), but the Jones and Dexter model builds upon many of the predominant theories in teacher learning, including analysis of formal teacher preparation

(Lawless & Pellegrino, 2007) and informal communities of practice (Wenger, 1991, 1998). It consolidates many of these theories about teacher learning into an easy and applicable model to be used in interpreting data gleaned through the present study. Though it was designed for inquiry in instructional technology, Jones and Dexter (2016) also applied this *holistic model* to all school-based teacher learning.

The holistic model of Jones and Dexter (2014; 2016), includes three categories for teacher learning. The first category is *formal learning*. According to the authors, this is the most studied and understood form of teacher learning. Formal activities are pre-planned, objective driven learning experiences (Jones & Dexter, 2016). I anticipated that teacher may learn about engagement through formal learning activities like college or university studies, school or district provided courses or sessions, organized Professional Learning Communities (PLCs), or the NBCT process of certification. In all of these instances, teachers would attend and be lead through targeted instruction designed to inform their knowledge of content or practice. *Informal learning* occurs when teachers use un-planned or un-organized resources to address concerns that “originate from the members’ intention” (Jones & Dexter, 2016, p. 253). This part of the model draws heavily from Wenger’s work on communities of practice (Jones & Dexter, 2014; Wenger, 1998), and posits informal learning as a socially driven, informal network of learning experiences. This aspect of the model seemed of particular. Teachers in this study might have cited informal sources of their engagement knowledge in the form of informal peer-to-peer observations, conversations with colleagues, or co-planning of lessons. Finally, Jones & Dexter add a third piece to their holistic model, which they note is underrepresented and under examined in the literature, *independent learning* (2014). Independent teacher learning is defined in this model as “learning activities that teachers engage in on their own initiative and possess no

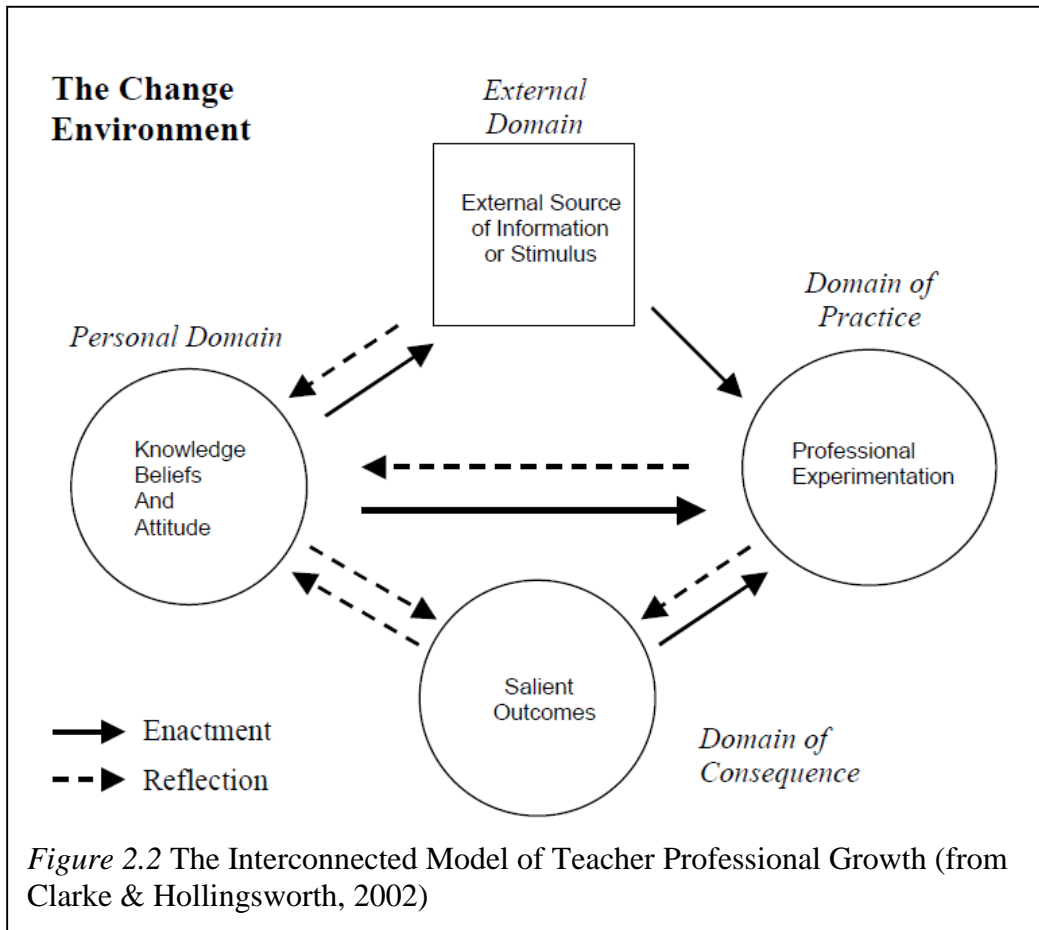
connection to their organization.” (Jones & Dexter, 2014, p. 319). Using this part of the model, I would look for independent sources of teacher learning, like searching websites for techniques promoting student engagement, in the responses of the participants.

By including the holistic model of formal, informal, and independent learning, I provided myself a concrete structure for interpreting the findings to this work’s second research question. It was difficult to envision an answer to the question, “How did you learn what you currently know about student engagement?” that did not fit in one of these three categories. However, based on my experience in the profession and what is known about NBCTs and expert teachers within the literature, the model does not delve into the actual learning process that occurs within the three categories of activities. For this, I turned to the Interconnected Model of Teacher Professional Growth by Clarke and Hollingsworth (200).

The Interconnected Model of Teacher Professional Growth. In a description of the major trends in modeling teacher development before the seminal work of Clarke and Hollingsworth (2002), two proponents of the IMTPG framework, Justi and van Driel (2006) identified three trends eventually leading to the adoption of the IMTPG. Researchers in this first era believed teachers mostly learn from experiences in the classroom, but they did not account for how teachers make meaning of these experiences. This wave of research also did little to explain how teachers change their instructional beliefs over time. The second trend in literature focused on teacher learning through contact with experts. Much like an apprenticeship, this model proposed practitioners learn instead through exposure to effective teachers, perhaps in the form of student-teaching or mentorship. Finally, the field called for modeling that considered the teachers active meaning-making process during learning. This trend in construction of

knowledge considers not only the sources of knowledge, but how teachers react to, interpret, and reflect upon experiences that inform their practice (Justi & van Driel, 2006).

One of the models within this third wave of research is the IMTPG. Clarke and Hollingsworth (2002) assert teacher learning occurs within four domains: the external domain, the domain of practice, the domain of consequence, and the personal domain. The interactions of these four domains are mediated through two processes, one of enactment and one of reflection. The model provided by the authors is included in Figure 2.2.



While this model may seem complex, especially compared with the clear cut descriptive categories of teacher learning like those offered by Jones and Dexter (2016), in my experience

learning how to teach effectively is an exceedingly difficult task. Clarke and Hollingsworth concur, stating “this model recognizes the complexity of professional growth through the identification of multiple growth pathways between the domains” (2002, p. 950). The model’s recognition of growth within the teaching practice is what makes it useful. While it is important to categorize the sources of knowledge of engagement, it must also be understood that teachers actively interpret and react to these sources in non-linear and intricate ways.

As an example, if a math teacher learned a new way to teach algebraic equations during a mandatory professional development session, the teacher’s learning during this session would take place within the external domain according to the IMTPG. By synthesizing this theory with the holistic model by Jones and Dexter (2014), this external source would be a formal development activity. Through the lens of the IMTPG (Clarke & Hollingsworth, 2002), the teacher’s learning does not stop at the external domain, rather it begins there. For example, the math teacher might try the strategy during the next unit. Through the mediating process of enactment, in this case using the new math strategy, the teacher moves to the domain of practice. The domain of practice encompasses the actions taking place in the actual classroom. The teacher then might reflect upon the outcomes, moving to the domain of consequence. If students scored better on their next assessment, or seemed to enjoy the strategy more, the teacher then may reflect on both the outcomes and the events in the classroom, and incorporate that new knowledge into the personal domain. At this point, the teacher may decide that the new strategy was worth his time and would become a believer or proponent in the new methods for teaching algebra. These beliefs would then inform future practice through the process of enactment, and cause him to reflect differently on outcomes.

The process could even begin anew if the math teacher in this example tweaked the methods based on his experimentation and taught it to others. To further explain this process, the Jones and Dexter's model (2014; 2016) could be used once again to describe any learning that might occur afterwards. If the teacher taught a formal session, then others might learn from this external domain under formal learning, or if he anecdotally told a colleague about the strategy, it would become an informal learning activity for the peer.

The IMTPG has been used to help understand how science develop content knowledge teachers (Just & van Driel, 2006), to assess development in math educators (Witterholt, Goedhart, Suhre, & van Streun, 2012), and to determine best ways to create collaborative curriculum (Voogt et al., 2011). This work will use the model to inform its inquiry on the sources of engagement knowledge for teachers while categorizing these sources according to the Jones and Dexter holistic model (2016). By combining the two complementary frameworks, I was able to analyze the responses of the teachers in this study with an understanding of *where* teachers encounter new ideas about the practice and *how* they react to those experiences to develop conceptualizations of engagement.

One of the defining qualities of master teachers is their ability to reflect on their practice (Darling-Hammond, 1998; Loughran, 2010), and NBCTs, in particular, have been shown to be more reflective than non-certified peers despite years of experience (Park & Oliver, 2008). NBCTs are also most likely to participate and lead formal in-building level professional development (Loeb et al., 2010) and collaborate informally with colleagues (Frank et al., 2008). With their exposure to multiple sources of professional development activities, and their ability to leverage the mediating factor of reflection as explained in the IMTPG, these teachers are an ideal sample to identify effective sources for developing knowledge of student engagement. The

understanding they have gained through extensive knowledge building in the practice may hold the key to untangling the web of multiple theories explaining student engagement as a construct.

Chapter 3: Methodology

Using a multiple case, multi-instrument research design, this study adds to the existing knowledge of student engagement as a usable construct to guide educational practice. The following research questions will guide data collection and analysis:

1. How do NBCTs conceptualize student engagement?
2. What are the sources for teachers' knowledge of student engagement?
3. How do NBCTs' conceptualizations of engagement compare to current theory?

Research Design

Model of Design

Interactive Model of Design. Maxwell (2013) encourages researchers to examine and develop five components that will interact with one another to determine the researchers design and approach to the inquiry. The five components are the study's: (1) goals, (2) conceptual framework, (3) research questions, (4) methods, and (5) validity (see Figure 3.1 for the graphic depiction of this model).

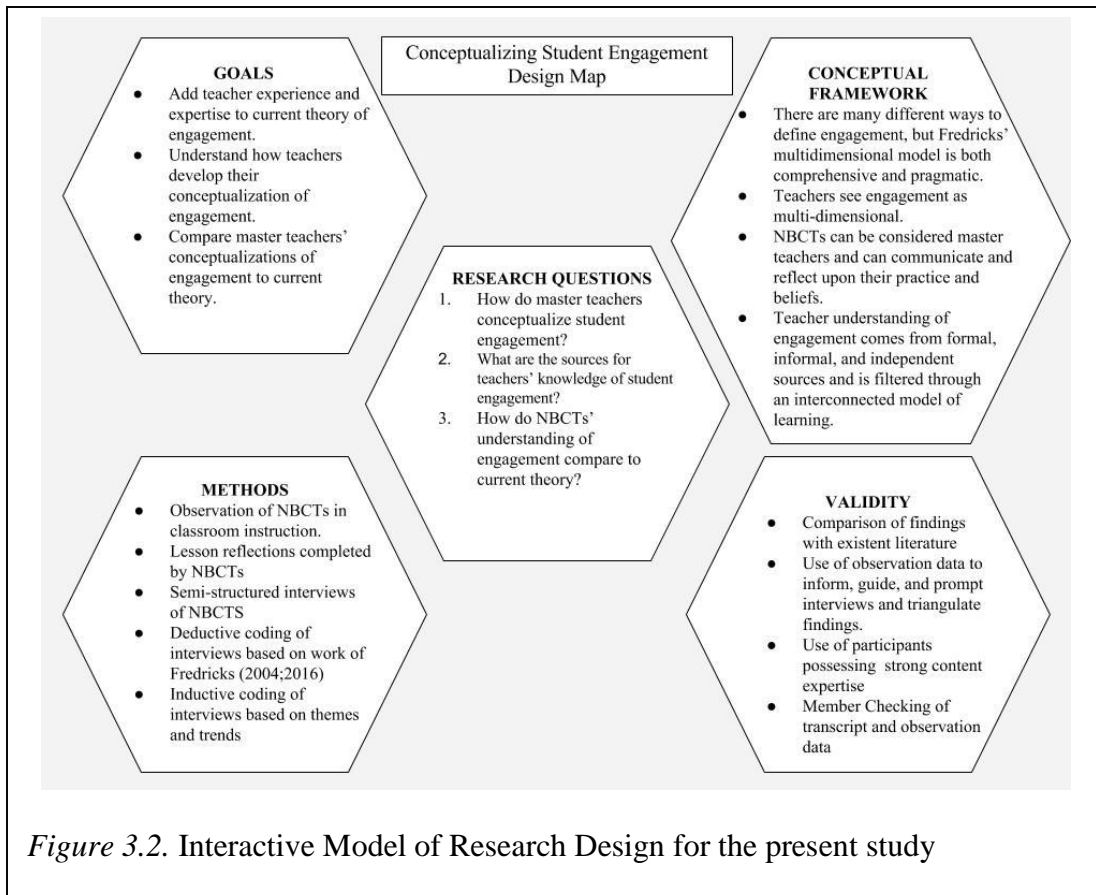


Figure 3.2. Interactive Model of Research Design for the present study

This model not only outlines five areas of concern and design choice for researchers, it also explains that each of these decisions, especially in qualitative inquiry, influences the other components. Maxwell notes that qualitative research uses less “off the shelf” design when compared to quantitative inquiry, so a thoughtful and repeated examination of the design model both before and throughout the research process is critical to ensuring that both the researcher and the study are able to effectively answer meaningful questions. As the researcher I found this process to be both essential and formative in framing and honing the study, especially when determining the methodological approach for the work. My own interactive model is shown in Figure 3.2

At the top of the model are both the design goals and conceptual framework. The goals of this project were to determine how master teachers define and understand student engagement as compared to current theory, and to discover the contributing factors and experiences that shape this conceptualization. The goals were worthy of research, because they allowed me as the researcher to either validate or expand existing theory through the practitioner knowledge of highly skilled educators. They will also allow me to help both the research community and teaching profession understand how teachers develop their knowledge base about student engagement. These goals interacted with the study's conceptual framework that supposes teachers would see student engagement as a multidimensional construct (e.g. Conner and Pope, 2013; Fredricks, Filesecker, et al, 2016; Jimerson, et al., 2003). This framework used the National Board Certification process to identify master teachers, and it assumed these master teachers could effectively explain student engagement—a task that can be elusive even for professional researchers of the construct (Eccles, 2016). Finally the framework began the project with the idea that teachers learn about engagement in the same way they build other practitioner knowledge, through formal, informal, and independent learning (Jones & Dexter, 2014) and an interconnected process of learning based on the IMTPG (Clarke & Hollingsworth, 2002).

One of the strengths of qualitative data collection is its ability to hone in on “naturally occurring, ordinary events in natural settings” (Miles et al., 2014, p. 11). It also allows for rich, context-dependent, data to be gleaned and interpreted by the researcher (Maxwell, 2013). A qualitative approach was selected for this work to achieve a deep understanding of how master teachers understand student engagement in their daily practice as educators. The operationalization of student engagement is still under discussion (Eccles, 2016), so the further use of qualitative methodology will help inform this discussion with context-laded data from the

unique perspective of master teachers that will help hone and develop our theoretical understanding of the construct.

Case study design. Different traditions and approaches exist within qualitative methodology (Creswell, Hanson, Plano-Clark, & Morales, 2007). The method chosen for this work was a multiple-case study using classroom observation, written lesson reflections, and semi-structure interviews as instrumentation (justification for the use of these instruments will be provided later within this chapter). A case is defined by Miles et al. (2014) as the “primary unit of analysis” within a qualitative case-study (p. 26). They explain a case can be defined in multiple ways, including an examination of single individuals or a group. By treating the teachers as individual cases within a multiple-case design, I reinforced that each participant comes with unique a unique context, professional experience, and pedagogical beliefs. I wanted to be able to compare how individual teachers understood engagement to the others participants. Therefore, by selecting this design I indicated this is a multiple-case study of ten individual master teachers as opposed to single-case study of the entire group. Miles et al. (2014) also assert that multiple-case deisgn is particularly useful if the cases “are chosen to be critical, extreme or unique, or revelatory” (p. 30). This inquiry focused on master teachers at the secondary level as the cases in question; each teacher served as an individual case of analysis. The use of a qualitative case study of teachers and students in the domains of math and science has been established in prior research on student engagement (Fredricks, Wang, et al., 2016). By incorporating a similar design using master teachers specifically, I gathered data that can be compared across studies to help build on current theoretical constructions. By focusing on master teachers as defined through National Board Certified Teachers (NBCTs), the case, I hoped the study would be both critical and revelatory, because NBCTs have demonstrated their

expertise as practitioners (Cavalluzzo et al., 2015) as well as the ability to effectively communicate practice and teaching philosophy with others (Frank et al., 2008). Trotter (2012), notes that the use of experts in case studies helps support valid and illuminating results. As the NBCT certification process is designed and evaluated through both an established institution like NBPTS and other NBCTs, its use in the design made a strong argument for the identification of expertise within the participants.

Population, Sample, and Study Context

Population. Participants for this study were recruited from a large, public, Mid-Atlantic school district. From this point forward the school district is referred to as Central Atlantic Public Schools (CAPS) to ensure anonymity of the research participants. All individual schools were given pseudonyms as well as the district. CAPS is a suburban district that encircles an urban city district, enrolling around 50,000 students in the 2015-2016 school year. Of those students, around 27,000 are enrolled in the secondary grade levels (6-12). The master teachers in these secondary classrooms were the focus of this study. The division is comprised of twelve middle schools (grades 6-8) and nine high schools (grades 9-12). Overall the division possesses a diverse student body with 40.8% of students reporting as White, 36.4% as Black, 9.8% as Asian/Pacific Islander, 8.2% as Hispanic, and 4.3% as “two or more races”. A similar distribution exists in the secondary student population (6-12) as in the overall division population (K-12). Refer to Table 3.1 for more of the division demographic.

Table 3.1

CAPS Student Body Demographics

Hispanic	American Indian/Alaska Native	Asian	Black	Hawaiian/Pacific Islander	White	Two or more races	Total
4,243	138	5,068	18,761	52	21,042	2,230	51,534
8.2%	0.3%	9.8%	36.4%	0.1%	40.8%	4.3%	

To show the economic diversity within the district, the percentage of students receiving free or reduced lunch (FRL) was also considered. Though far from a perfect proxy for level of poverty or socio-economic status of students and families, FRL data for school districts and schools has long been used to help show economic differences between groups. FRL has also been deemed by the National Center for Educational Statistics as an acceptable measurement for analysis of poverty (NCES, 2015). The present study only used this data to help inform and illuminate possible contextual differences between teacher participants, therefore I included this measure in the demographic discussion. Overall CAPS reports 41% of students as receiving free or reduced lunch, but an examination of these percentages *by school* revealed sizeable variations in the number of students on FRL from one building to another. For example, Madison Middle reports a 4.1% of student on the free and reduced lunch program, while Harrison Middle reports 81.6%.

Table 3.2

CAPS School-Level Demographics and F/R Lunch

School	% Hispanic	% Asian	% Black	% White	% Two or More Races	Total Male	Total Female	Total Students	% F/R Lunch
Adams Middle	21.4	6.3	47.6	18.7	5.7	546	485	1031	62.40
Buchanan Middle	12	13	20	50	4	506	499	1005	39.50
Carter Middle	5	1	49	38	5	475	437	912	55.85
Eisenhower Middle	3.0	0.4	87.0	6.1	2.8	497	520	1017	62.08
Ford Middle	4.9	23.4	8.1	59.1	4.3	464	412	876	8.82
Garfield Middle	6.7	11.2	23.4	52.9	5.2	560	481	1041	27.07
Harrison Middle	3.5	1.9	90.5	2.2	1.6	466	387	853	81.56
Jackson Middle	6.3	29.7	13.2	47.1	3.4	506	529	1035	21.42
Johnson Middle	9.8	5.6	8.6	71.3	4.3	562	525	1087	26.62
Kennedy Middle	5.6	8.3	10.8	71.6	3.7	465	471	936	16.13
Lincoln Middle	4.8	0.1	79.9	11.1	3.9	539	489	1028	66.70
Madison Middle	3.9	14.7	4.7	72.8	3.6	389	399	788	4.21
McKinley High	4.6	10.3	18.4	62.1	4.2	850	899	1749	13.47
Monroe High	4.7	13.8	5.2	72.9	3.3	936	790	1726	5.19
Polk High	10.6	7.0	12.6	65.9	3.4	916	863	1779	23.98
Roosevelt High	5.5	11.2	8.2	71.8	2.9	1022	809	1831	12.53
Taft High	3.1	9.8	72.9	10.9	2.9	811	936	1747	53.16
Truman High	12.9	3.3	48.4	30.3	4.8	857	766	1623	50.82
Tyler High	3.5	0.6	67.4	24.3	3.6	885	784	1669	52.49
Washington High	5.3	0.4	80.0	11.2	2.7	963	825	1788	64.91
Wilson High	15.1	14.3	31.2	35.0	3.8	815	866	1681	42.57

In terms of context, this example transitions to an important point about the district. As a researcher conducting work in this district, a ten-year employee of the system, and a K-12 product of CAPS, I feel it is important that I highlight what I see as the two most important pieces of context about the district and its secondary schools. First, there exists a major divide between the two geographical sides of the district- east and west. Classrooms in the west end of the county have majority white, high to middle class students. For example, Madison Middle (the school with the lowest FRL percentage) consists of 72.8 white students, and 14.7 Asian with only 4.7 black and is in the west end of the district. Comparing that again to Harrison middle (the highest in terms of FRL), a school with a 90.5 black population and 2.2 white and 3.5 Hispanic, shows stark differences once again, as Harrison is an east-end school. These schools are not anomalies; for the most part, sorting the schools by race, FNR, *or* east/west geography would place them in nearly the exact same order. This information would be neither novel nor shocking to a district that lists “Closing Gaps” as one of its four guiding objectives.

However, the district was not defined solely by this inequality. In 2001, CAPS implemented the first public school-wide 1:1 laptop-to-student initiative—a major undertaking that resulted in each student receiving a district-provided laptop. The district has made high-quality teaching and learning with technology a priority to, in no small part, address inequality from one end of the district to another. Though many district specific factors could have influenced the teachers and their contexts, from testing policy to administrative evaluation choices, and from staff culture to stakeholder involvement, the two most observable and palpable factors describing this district were that the ethnicity and economic status of students in one school varied significantly from those in another, and that all schools in the district were heavily invested in innovative teaching methods using instructional technology.

This study did not focus on *all* secondary teachers in the district though. It examined the beliefs and perspectives of 97 nationally board certified teachers (NBCTs) within CAPS. CAPS reported 197 total NBCTs at the time of this study, but 100 teach at the elementary level and are not part of the study's population. I excluded elementary teachers from this work mostly due to the fact that the experience of the elementary teachers within CAPS is notably different than that of secondary. CAPS elementary teachers see the same students each day and teach multiple subjects, while secondary teachers (whether in middle or high school) teach multiple classes of students in a single domain. Neither the teaching license for CAPS teachers nor the NBCT process make a distinction between middle and high school instruction in their awarding of instructional certification, but they do set elementary teachers apart, requiring different criteria for licensing of K-5 teachers than grades 6-12. By choosing to focus on both middle and high school teachers, the potential sample was larger in size and more uniform in school structure. Though theory on engagement has yet to explore possible differences in students within various grade levels, the focusing of context on one or two school levels is common practice (Conner & Pope, 2013; Fredricks, Filsecker, et al., 2016; Shernoff, et al, 2003).

NBCT as a metric for master teacher. In chapter two of this work, I outlined the research landscape concerning the National Board of Professional Teaching Standards (NBPTS) and its NBCTs. With that base of research in mind, I must here make the case for using National Board Certification as a qualifier for “master teacher” within CAPS. It is worth restating that the goal of this project was to determine how master teachers, individuals who express the highest possible skill in the craft, conceptualize student engagement so that both practitioners and researchers can learn from their pedagogical knowledge. So why choose NBCTs as the proxy?

First, I looked at the most common measurements of high quality teaching for CAPS instructors. One option was to take teachers whose students produced the highest test scores, but I did not consider this metric remotely viable due to inequity in scores across different schools and student populations (e.g. honors classes vs. standardized or collaborative classes, high income schools vs. low income). Another option considered was to interview Teacher of the Year winners from CAPS schools—each school in the district awards a single faculty member the designation each year as part of a district-wide initiative. The criteria for this award vary from school to school, however, making it difficult to compare one school’s Teacher of the Year candidate to another. In addition, the process usually involves faculty voting in the form of a single-name nomination by faculty members who choose to complete the survey. Having worked in and with many of the schools in the district, I know this process often puts forth good teachers, many of whom would likely be considered master teachers, but it could easily be a measure of collegial respect or even popularity. Though tempting, the metric is neither sound nor reliable.

Another consideration was to survey administrators, parents, or even students as to who might be a master teacher, but here again, the approach seemed riddled with inconsistencies and confounding factors. Administrators vary in their involvement and observation of classroom teaching, and parents and students might nominate according to reputation or likability. The district itself provided another option for selection; it awards select teachers a designation called “CAPS 21” each year to those who create and implement excellent lessons based on district-provided rubrics. Though CAPS 21 winners could be master teachers, the use of this as proxy seemed more dependent on single lesson writing and display rather than pedagogical expertise

displayed over years. With these other options critiqued and disqualified, the NBCT stood out as the ideal metric given the available information.

There are several reasons Board Certification is such a powerful proxy for mastery. First, NBCTs spend at the least one entire school year making a case for their skill and knowledge as practitioners. They must submit four entries to the National Board of Professional Teaching Standards (NBPTS), and these entries are reviewed by multiple assessors who conduct strict, process-driven, evaluations of the teachers' abilities. These entries include two fifteen-minute videos of lessons and corresponding written reflections of practice. One of the video entries and analyses shows the instructor in a whole group teaching session, while the other is of a small-group setting. The written entry for each of these is twenty pages of analysis, reflection, and critique of the teacher's own practice (NBPTS, 2016). The third entry requires teachers to submit several stages of work from multiple students, where the teachers must explain how they improved the students' performance in their domain—each area of certification is content-based, so Social Studies teachers have content-specific requirements that differ from an English teacher's for example. The fourth component requires teachers to submit documented accomplishments that show teachers to be: (1) a partner with students' families and community; (2) a learner within the profession; and (3) a collaborator and/or leader within his or her school, district, or professional community (NBPTS, 2016). These four entries are scored by separate reviewers (all NBCTs and certified reviewers) based on tightly constricted and pre-established rubrics (NBPTS, 2015). Finally, all teachers must take a content and development specific assessment that tests both their knowledge of their domain as well as appropriate pedagogical practices that correspond to their subject (NBPTS, 2016).

When listed out, the requirements for NBCT are clearly more exhaustive than the other options, but the process is neither perfect nor singular for determining teacher quality. Researchers have found flaws in the NBPTS research on efficacy, and the National Research Council has made several recommendations that are still being met by the Board before it can be deemed the premier measurement for high-quality teaching (Hakel, Koenig, & Elliot, 2008). However, a great deal of evaluation and academic research has been devoted to the study of NBCTs. Much of the findings are discussed in my review of literature, including evidence that NBCTs are more reflective in practice than non-NBCTs (Park & Oliver, 2008), and are also more likely to shape in-building practice of colleagues (Cannata et al, 2010), have higher self-efficacy in teaching (Woods & Rhoades, 2013), and show a larger impact on student achievement over the course of a school year (Chingos & Peterson, 2011; Clotfelter et al., 2007) when compared to non-certified educators.

Finally, as the researcher, I was able to leverage my own knowledge of the process and district to make the case for the use of NBCT as the measurement for master teacher. I am an NBCT, a Teacher of the Year within the district, have won several CAPS 21 awards, and have served as a teacher-coach for the division. I believed this process to be the best possible option based on these experiences. To achieve NBCT, a teacher must demonstrate his or her ability to think reflectively, show real footage of his or her work in the classroom, and take an assessment that requires a great deal of understanding of the craft of teaching. I know that there are master teachers in the district who have not achieved this certification, but I do not believe that there are achieved NBCTs who lack mastery. For these reasons, I proceeded with the understanding that this is a study of master teachers rather than just NBCTs specifically, and felt that I have done due diligence in finding the best possible measurement available.

Sample. The sample of teachers derived from master teachers currently employed in the district at the secondary level. As the teachers are already bounded by a unified expertise of their practice as NBCTs, I approached sampling of these cases through Maxwell's (2013) recommendation of "purposeful sampling," whereby participants are "selected deliberately to provide information that is particularly relevant to the questions and goals that can't be gotten as well from other choices" (p.97). Qualitative samples need to be "fairly homogenous and share critical similarities related to the research question" (DiCicco-Bloom & Crabtree, 2006); what these highly skilled educators share is a strong understanding of effective teaching and the ability to understand their students (Philips, 2008). However, within this constrained group, I used a multiple-case sampling strategy (as opposed to a single-case sample of a single teacher). This method helped make a stronger argument for any emerging theories to be, as what Miles, Huberman, and Saldana (2014) call, "generic", because they would hopefully be seen in the responses from multiple individuals (p. 34).

Sampling Protocol. At the time of data collection, the district listed 97 total NBCTs at the secondary level. Unfortunately, it did not have official record of how many NBCTs are within each school, though I knew from my work with the district that most schools have one or two NBCTs on staff while others have as many as seven or eight. These 97 NBCTs served as the participant pool for this work. At the beginning of the study, I established sampling goals to help guide my work in obtaining a strong sample. The goals were to include participants from both the middle and high school level, from multiple schools on different geographical points in the district, and from diverse content areas. Purposive sampling considers both context and theory (Miles et al., 2014). My knowledge of the CAPs context and its demographic data showed that schools differ in terms of student demographics (ethnicity and SES), so I wanted to sample

teachers from different schools across the district. I also wanted to try to include teachers who work in a variety of environments in terms of student SES, so I categorized schools as: 1) *low-poverty*- schools under 25% FRL, 2) *mid-poverty*- schools between 25%-50% FRL, and 3) *high-poverty*- schools reporting over 50% FRL. This categorization strategy was taken from the Nation Center for Education Statistics (2017), and provided me with easily defined categories to denote student SES within the teachers' schools.

There were a few reasons for including SES within the sampling context and description of teacher environment. While many teachers have taught in more than one school over their career, giving the participants exposure to various environments in terms of community wealth and ethnicity, it was likely their view of engagement was informed, in some part, by the demographics of their current student population. Teachers in high-poverty environments may deal with more restrictive or prescriptive oversight, because high-poverty schools are more likely to be in danger of losing state accreditation (NCES, 2017). Teachers in low-poverty environments may feel more pressure to meet parental expectations; as a teacher in a low-poverty school within this district, I knew this to at least be a common belief among colleagues. While the focus of this study is directed towards how teachers conceptualize and develop their knowledge of student engagement, it was prudent to include these contextual factors in my sampling and descriptions of context to help completely understand and interpret any emerging themes.

Engagement research has begun to suggest possible differences in engaged behaviors according to domain (Wang et al., 2016), therefore I wanted to account for the subject area of sampled teachers. With 97 possible participants for this study, I proposed five criteria to extract a suitable sample for this inquiry. The five criteria were:

- 1) Master Teachers who volunteered to participate
- 2) Varied representation of teachers by schools within CAPS (a minimum of four different schools out of a total of 21 possible schools)
- 3) Varied representation of teachers at schools from *high*, *mid*, and *low* poverty populations (NCES, 2017) (approximately equal representation).
- 4) Varied representation of teachers by level (approximately equal representation)
- 5) Varied representation of teachers by content (a minimum of four out of a possible eight different content areas)

The protocol included a strategy to help me organize participants into waves for data collection. The first wave was to consist of ten master teachers using the five selection criteria. These teachers were to be observed and interviewed, and throughout the process I planned to use reflective methodological research memos to collect and record the experience. If at any point in the first wave I felt that I will needed more interviews, I planned to contact a second wave of five teachers, using the same selection criteria with the corresponding minimum numbers cut in half and rounded down. The deciding factor destemming whether or not these waves would be needed was the achievement of saturation of data, which is explained later in this discussion of methods. The process would then continue with the option to contact a third wave of five additional participants depending on the work's progress in answering the research questions as thoroughly as possible and saturation of data.

In regards to anticipated sampling size, Patton (1990) notes that nowhere is the ambiguous nature of qualitative inquiry more evident “than in the matter of sample size.” (p. 184) For effective data collection, he affirms the researcher must find balance between *breadth* and *depth* where in-depth responses from a smaller group are especially valuable if they are

information-rich cases. In a recent meta-analysis of qualitative case studies, it was found that mean sample size ranged from 15-30 participants (Mason, 2010); however, factors such as “expertise of participants” have been shown to reduce the number of required interviews to reach data saturation in case studies (Jette, Grover, & Keck, 2003; Mason, 2010). Miles, Huberman, and Saldana (2014) note that “a study with more than 10 cases or so can become unwieldy” (p. 34). Patton (1990) recommends that researchers approach the decision of sample size by proposing a *minimum sample* constructed through three things: (1) the researcher’s expectation for reasonable coverage of the phenomenon in question; (2) the study’s purpose; and (3) the interest of the stakeholders. With these recommendations in mind, I began with a minimum sample of ten teachers, but included the flexibility of additions through two more waves.

Achieved sample. After recruitment, I ended up with exactly ten volunteers from the pool of 97 NBCTs. Though I lacked the numbers to implement my full sampling protocol, I was pleased overall with the diversity in the sample in terms of content area, context, and level. Table 3.3 shows descriptions of the participants.

Table 3.3

Contextual Description of Sampled Master Teachers				
Name	School	Level	Content Area	School SES*
Ms. Anderson	Jackson	Middle	Math	Mid-poverty
Ms. Brown	Polk	High	Business	Mid-poverty
Ms. Cook	Polk	High	English	Mid-poverty
Mr. Dawson	Ford	Middle	Science	Low-poverty
Ms. Engle	Monroe	High	English	Low-poverty
Ms. Frank	Ford	Middle	Science	Low-poverty
Ms. Gray	Eisenhower & Washington	Middle and High	Reading	High-poverty
Mr. Hart	Taft	High	Math	High-poverty
Ms. Ian	Ford	Middle	Reading	Low-poverty
Ms. Jackson	Wilson	High	Science	High-poverty

*School SES was categorized as: *High SES*- between 0%-25% FRL; *Middle*- between 25%-50%; *High*- over 50% (NCES, 2017)

This sample met all the goals of the initial sampling protocol. Participants worked at eight different schools within CAPS, meeting my proposed quota of at least four. It should be noted that Ms. Gray works at both Eisenhower Middle and Washington High School, a piece of context that I will explain more thoroughly in Chapter 4. Four teachers worked in low-poverty environments, three worked in mid-poverty schools, and three worked in high poverty environments. This meets the third sampling criteria showing close to equal representation along all three categories for SES. Six teachers work in CAPS high schools, and five in middle schools, satisfying my fourth criteria of approximately equal representation across levels. Finally, five subject areas are represented by the sample: *math*, *business*, *English*, *science* and *reading*, which met the minimum of criteria five—at least four subject areas. Overall I was very pleased with the variation of teachers in the sample, and I was grateful for the detailed protocol used to guide

sampling. While I did not have the luxury to turn teachers away or select a specific sample from a larger pool, the establishment of a set protocol allowed me to feel confident in my sample of ten teachers who met all pre-determined sampling criteria for variation in practice.

Procedures and Data Collection

Recruitment. All recruitment for this project occurred through collaboration with CAPS Department of Research and Planning (DRP). The recruitment protocol was developed in partnership with the school division. After completion of the Institutional Review Board (IRB) process and full approval by the university IRB, the DRP sent an e-mail to all registered NBCTs in CAPS. The e-mail asked the NBCTs to respond to me directly if they were interested in assisting in the research study. The drafted e-mail can be seen in Appendix A.

To separate myself as a researcher and maintain a consistent rapport with the participants, all e-mail communication occurred through my university e-mail account. I did not approach the participants as a CAPS colleague, but rather as an independent researcher associated with the university. Though there may have been some advantages in regards to interview rapport if I came to them as a coworker, I did not want participants to misunderstand my role as a researcher. In e-mail and personal conversations, I made clear that the data collected was for my own inquiry and not that of the school district. This ensured both clarity and forthrightness from the beginning of my interaction with possible participants, and also reinforced that this project was not directly tied to their employer. However, I did use my experience as a teacher and fellow NBCT to help establish rapport, trust, and common language with the participants in order to gather robust data from my interactions with the master teachers. Many times during the interviews teachers referenced district level initiatives, instructional strategies, or parts of the

NBCT process using practice-specific terms and languages. My ability to understand their meaning helped immensely during the interviews and analysis of the data.

The recruitment e-mail was sent to possible participants immediately after IRB approval of the project. Over the next week I received e-mail responses from the participants. I sent each volunteer a thank you e-mail, and told them I would communicate again with them at the end of the week. If I received over ten participants, I would have proceeded with my plan of dividing the pool into the three categories—first wave ($n=10$), second wave ($n=5$), and third wave ($n=5$) while applying the five selection criteria outlined above will be applied to each wave. However, as I received exactly ten, I did not employ the wave protocol, though again, the sample was able to meet all five criteria with the ten respondents.

Scheduling of observations and interviews came through e-mail communication between the participants and me. All ten were very responsive with this process, and though I had to reschedule observations in three cases and interviews in two due to schedule conflicts, all ten initial respondents remained active and included in the study.

Reflective memos. A fundamental part of qualitative research is the regular recording and review of research memos (Maxwell, 2012). These informal writings can not only be used for later data analysis, but they help the researcher reflect on his or her work, refine the study design, and facilitate his or her thinking during the study. I believe strongly in the importance of writing memos in my own work, as the process of writing is invaluable for my own self-critique and evaluation as a researcher. Memos were written to help me formulate and understand my methodology and analysis, and also serve as vessels for reflection upon the process. Memos were either typed in a running memo document, recorded within the AtlasTi program, or hand written. After data collection, I compiled all existing memos in a running document and assigned each

memo a number and date for later reference. Using a strategy of *data condensation* proposed by Miles et al. (2014), reflective memo data was summarized rather than specifically coded.

Classroom observation. Teachers were asked to schedule a classroom observation when “typical classroom instruction” is occurring. This procedure was selected for two reasons. First, I wanted to establish healthy rapport with the teachers and honor their time as professionals. By allowing them to select the time and making it clear that no extraordinary lesson is expected during observation outside of their typical instruction, I hoped to minimize disruption of their practice. Second, seeing the teachers in as natural of a setting as possible allowed me to maximize information gathered during the interview that can later inform the interview and triangulate its data. For example, if I observed a teacher during a 45-minute assessment, little would be gained from the experience for both me and the teacher. Similarly, if I observed a specially constructed lesson where the teacher felt obliged to perform, my observation would be atypical of the teacher’s usual practice. By giving teachers autonomy to select when I observe, I gave them the power to help mitigate disruption and assist with the inquiry on their own terms. In my memos, I noted the teachers seemed very comfortable with observation, and in no case did it appear to me, as an observer, that the observations were intrusive.

Any observation of a classroom brings about the danger of observer effects—students may act differently with a stranger in the classroom, the teacher may feel anxiety of judgment, or may perform atypically or exceptionally with the presence of an audience (Adler & Adler, 1998). Here is where my experience as a classroom observer was an asset to the study—I spend a great deal of my day in other teachers’ classrooms, and I also know that master teachers often (though not always) possess more comfort during observation than novice or average teachers. During the observation I used my experience as a professional and my awareness as a researcher to

minimize any disruptive effects my presence may cause to the teacher or the students. In my interactions with the teachers, many specifically expressed that observations in general did not change their practice. If anything, I had to resist interacting with teachers and students, because several of the teachers welcomed me to question students or offer perspectives. During observations, I sat quietly in the perimeter of the classroom taking notes on paper to limit my own effect on the class, and I felt largely successful in this mission. While observing, I used an observation tool (Appendix B) to help organize my thoughts and align them with possible indicators of engagement. I explain the use of this tool in greater detail later within the description data instrumentation.

The primary purpose of the observations was to provide the teacher and the researcher with a shared experience to reference throughout the interview. As I progressed with the study, I found this part of the methodology invaluable. My observations allowed me to draw on specifics and continue the interview conversation in greater detail with concrete references to practice. There is also precedence within the literature for the use of observational data to help inform and complement interviews about engagement; this practice has not just been used by other researchers, it has been noted as a valuable way to enhance qualitative interviews about the construct (Fredricks & McColsky, 2012). The observations for the present study also helped to triangulate the data. Triangulation occurs through the use of “multiple methods as a check on one another” (Maxwell, 2013, p. 102). If I limited this work to only talking to master teachers about student engagement without observing their instruction, then my conclusions would run the risk of being limited by each teacher’s ability to communicate their ideas one-on-one. Seeing them engage students in the classroom helped confirm their answers. For example, when I saw a teacher use the Kahoot online classroom game, I was able to ask her specifically about her

instructional choice to use the program. I found that she chose this to better engage the students through an interesting activity (Ms. Brown). We were then able to discuss her thoughts on interest as related to engagement, a conversation that would not have occurred without the observation.

Written lesson reflections. Upon completion of the lesson, and before the interview, teachers were asked to respond to four reflective questions related to the lesson, through an online form. Maxwell (2013) asserts “for interviewing to be useful, you need to ask about specific events and actions rather than posing questions that elicit only generalizations or abstract opinions” (p. 103). I used my own observation notes as reference points during the interview, but I also wanted the teachers themselves to spend time thinking about the lesson before we talked with one another to support deep and productive responses during the interview. The teachers had as much time as they need to complete the reflections, but were encouraged to submit the form as soon after the lesson as possible. The link to the reflection form was sent to teachers immediately after the lesson, and all ten teachers completed this reflection before the interview. The form questions are included in Appendix C. In analysis, I used these reflections less than I had anticipated; I found that most of the answers were repeated and greatly elaborated during the interview. However, through my memos I recorded a belief that the lesson reflections probably helped to jump start the teachers’ thoughtful evaluation of their practice, and in some cases they assisted me in pairing down and confirming statements by the teachers during the interview. This was especially true in two cases (Ms. Gray and Ms. Cook) where my conversation with the teachers was lengthy and tended to jump quickly from one topic to another. In these instances, the incorporation of the reflection answers helped in summarizing their conceptualizations and confirming which elements seemed the most important to the teachers.

Interviews. Interviews of teachers followed an in-depth, semi-structured format. Semi-structured interviews allow the researcher to consistently ask the same questions to each participant in the same order—a standardized practice that mitigates interviewer error and facilitates easy analysis of data. On the other hand, they allow a level of flexibility and establishment of rapport not present in a structured interview, as structured interviews require researchers to follow a word-for-word script in conversation (Fontana and Frey, 1998, Patton, 1990). This inquiry contained clear goals for data collection (determining how master teachers conceptualize student engagement and how these beliefs are created), so approaching the interview with a set plan was most appropriate. Miles et al. (2014) note that if research directives are known, a semi-structured plan saves time for both the interviewer and participant, and helps focus the inquiry to be more effective (2014). This approach ensured that I entered interviews prepared, as I was ever-mindful of the teachers’ time and schedule, and that every teacher was asked similar questions, while also allowing me to establish rapport with them. The interview protocol contained primary questions and potential follow-up questions, each targeted toward specific research questions of teacher conceptualization of student engagement. It can be found in Appendix D and will also be elaborated upon during discussion of instruments.

Each interview took place after the classroom observation and reflection form were completed. While observations occurred in the teacher’s classroom during school hours, I had initially planned for interviews to take place off-campus, after work hours at a mutually agreed upon location (generally a coffee shop or café with partitioned off areas suitable for audio recording of interviews). However, as I went through the process, I found many teachers requesting to meet in their classrooms, because it would be easier for them to schedule. I consulted with my advisor and dissertation chair, and we decided to allow on-campus interviews

to occur during times convenient to the teacher. Ultimately, seven of the teachers made the request to meet on-campus, while the other three took place at a coffee shop near the teachers' home or school.

During the interview I referred to observation notes while talking to the teacher, especially within specific question stems that relate to context (e.g. Question 7- *In the lesson I observed, do you think students were engaged? How do you know they were or were not engaged?*). Similarly, I used the teachers' written reflection on the essay to inform context-grounded interview questions. The interviews took anywhere from twenty (Ms. Brown) to forty-five minutes (Ms. Gray). They were recorded through my computer, and transcribed as soon as possible after the interview.

Teachers were given consent forms before the observation, and all confidentiality procedures were reviewed both in writing through this form and verbally at the end of each observation and beginning of the interview. I reminded each participant that they would remain anonymous throughout the project and that they may choose to ask for the deletion of their responses at any time. They were also sent interview transcripts as soon as the audio data was transcribed. Using this process called member-checking (Maxwell, 2013), I gave teachers the opportunity to amend or remove any responses given during the interview. Interview transcripts were sent to the participants via e-mail and were not analyzed until they were returned with each teacher's approval. Only Ms. Gray chose to amend answers through checking; she changed her years of experience and the wording on two of her answers. All teachers responded to the check, even if they did not wish to change answers.

The prevailing mindset I used during interviews was to establish rapport and neutrality with the teachers. According to Patton, "rapport is built on the ability to convey empathy and

understanding without judgment” while neutrality means that their answers will neither encourage my favor or disfavor (1990, p. 317). I know that teaching can be a highly emotional act and for many professionals that can lead to feelings like pride, self-worth, and worry (Woods, 2013). Because I hoped to add more teacher voice to the current theoretical understanding of engagement, the establishment of rapport, through my demeanor and the interview process meant a great deal in the achievement of this goal. During the process, I reflected constantly to ensure that I was approaching interviews with neutrality and established strong rapport with the participants to gather as much useful data as possible. I felt largely successful in this goal. Many teachers expressed after the interview that the conversation left them energized as teachers, and six of the ten wanted to know more about my study and how it could help them in their practice. Later in this section I will explain my procedure for communicating the findings with all participants, many of whom outwardly expressed a desire to learn from the work themselves.

Though interview were recorded, I took notes during and after the interviews to both inform follow-up questions to stems and continually develop and hone the protocol form one interview to another (Patton, 1990). These notes later were transferred to research memos for later examination and proved helpful in extracting major themes in the answers of the teachers.

Instruments

Demographic questionnaire. The initial plan for the project included a demographic questionnaire before their observation and interview. This data from the questionnaire hoped to provide extra layers of context as I spoke to participants their instructional practice. Included on this questionnaire was the participant’s: (1) gender; (2) school; (3) grade levels taught; (4) subject area; (5) years of experience; (6) years teaching at current school; (7) educational experience (i.e. bachelors, masters degrees, post-masters degrees) and (8) ethnicity. However,

after the first two interviews (Anderson & Brown) I opted to include these questions within the interview protocol after consultation with my dissertation chair and advisor. While the same data was collected in every case, I found a basic discussion of context helpful in easing the participants into the interview process and establishing rapport between the participants and me. In two cases (Cook & Frank) the teacher did not provide years of experience, but I was able to go back and ask these questions when I sent transcripts for member-checking over e-mail to obtain the data points. After I altered this procedure, I noted even stronger rapport with the participants, and favored verbally asking the demographic questions rather than using a form.

Observation tool. The observation tool (Appendix B) was used to reference and record specific classroom instructional practices and the holistic reactions of the students toward the instruction. This tool was divided by categories designed to document evidence of affective, behavioral, and cognitive engagement, as well as events occurring throughout the lesson that may be referenced during interviews or reveal the level of engagement of the class. As I was not able to find a suitable, whole-class observation tool for student engagement based on current research, this tool was developed using the Fredricks model (Fredricks et al., 2004) as its theoretical framework and my experience conducting classroom observations in secondary classrooms to guide its structure. After the first use of the tool, I made a slight adjustment to separate observations on engagement by instructional activity as opposed to one recording of engagement levels for the entire class. Otherwise, the tool proved helpful during both the interview and analysis and interpretation of data.

The observation tool was instructor-centered, and focused primarily on teacher behavior and instructional choices made in design and implementation of the lesson. It had three categories based on the Fredricks ABC Model (Fredricks et al., 2004; Fredricks, Filsecker, et al.,

2016). For each of these categories, a percentage of students are marked as having “No” “Low” “Medium” or “High” levels of engagement along all three sub-processes (affective, behavioral, and cognitive). For example, Ms. Cook had two major instructional activities during her class, a whole-class discussion, followed by small-group work. During the whole class discussion I noted evidence of high behavioral and affective engagement in over 80% of her students, but had no overt evidence of cognitive engagement. During the small-group work, I saw high levels of all three sub-processes in 80-100% of students. I used the number of observed students fitting each category to determine percentages, and examples for each category were provided within the rubric to help determine the level of engagement for each process (no to high). The tool also required me as the observer to fill out a timeline that details the teaching methods of the instructor. For example, for Ms. Engle I recorded her use of a whiteboard vocabulary review activity for the first twenty minutes of the observation, then she moved into a teacher-driven lecture using a powerpoint for the next twenty-five minutes. In addition to descriptive recordings of the lessons’ structure of activities and material used, I looked for instances when the teacher made an instructional decision targeted towards engaging the class. These included specifically outlining behavioral expectations, such as a teacher telling the class “I want to see more hands up right now” (Anderson), or asking the students to explain the value in the learning activity by having them explain when they would use statistics in a profession (Hart). I used these observations to inform questioning during the interview to achieve deeper and richer responses related to engagement knowledge.

Written lesson reflection. The written lesson reflections (Appendix C) were completed by the teachers’ after the observation. The reflection included four questions asking the teacher to analyze and reflect upon the observed lesson. NBCTs were well-suited for this procedure as

lesson reflection is a major part of the certification process (NBCT, 2016) and have been shown to be more capable than non-certified teachers in discussing and reflecting upon their practice (Park & Oliver, 2008; Phillips, 2014). The four lesson reflection questions were :

1. How do you think the lesson went?
2. Do you think students were engaged in your lesson?
3. How could you tell if students were engaged or not?
4. Did you take student engagement into consideration when you planned this lesson? If so, please explain.

Teacher answers were collected through a Google Form and coded before the interview.

Answers were used to support any context-related question stems in conjunction with my own observation of the class (i.e. “In the lesson I observed, do you think students were engaged? How do you know they were or were not engaged?”). The follow-up questions to this stem came from the teacher’s reflection on the lesson (i.e. “You said that you could tell some of the students weren’t engaged, because they weren’t paying attention. Can you tell me specifically how you knew they weren’t paying attention?”). Though the questions on the lesson reflection and questions about the lesson through the one-on-one interview may seem repetitive, asking similar questions through different instruments can add to the overall depth and richness of data (Maxwell, 2013), and ultimately I found them a valuable part of the data collection process.

Interview protocol. The interview protocol (Appendix D) was developed to address the three research questions and was additionally informed by an examination of the 2016 Fredricks, Wang, et al. study of teacher and student conceptualizations of student engagement in math and science, and major works surrounding engagement theory (e.g. Eccles, 2016; Jimerson et al, 2003; Fredricks et al., 2004; Marks, 2000; Shernoff, 2003). It consisted of eleven major question

stems with potential follow-up questions based on participant responses. Each stem corresponded to one of three categories. I gave the first category a designation of A, while the other two received numbers. While the use of both letters and numbers to identify categories may seem an odd choice to an outside reader, it allowed me to separate which interview questions were targeted at establishing data context (Category A) and which questions were focused directly on guiding research questions (Category 1 and 2). Keeping the research question oriented stems aligned with the number of their research question helped keep me mindful and focused on these questions throughout the process. Category A (CA) stems were aimed at establishing rapport between the teacher and me to help facilitate in-depth discussion that will lead to rich data collection. Category 1 (C1) stems related to the first and third research questions of the study—finding out how master teachers conceptualize engagement and how their conceptualization compare to current theory. Finally, Category 2 (C2) stems corresponded to the second research question of this study—*What are the sources of master teachers' conceptualization of student engagement?*

CA stems. CA questions served two purposes. They first allowed me establish a working rapport with the teachers by encouraging them to briefly tell their own stories as educators. In my experience, many educators enter the profession for different reasons and different goals. They also come to the profession in a variety of ways. The CA questions allowed them to set their own stage as participants, and were designed to stimulate an environment where participants feel comfortable giving in-depth answers—as these initial questions leave a great deal of room for elaboration and context providing. As previously mentioned, I moved the demographic questionnaire questions to this discussion after seeing most of the answers emerge naturally during this part of the interview after talking to two participants. The CA responses helped

greatly in my eventual analysis. I gathered so much data in terms of the teachers' context that I was able to create a detailed narrative on each teacher that incorporated their experience and path within the profession to add to the richness of collected and analyzed data.

C1 stems. The C1 stems focused on the teachers' understandings of student engagement in the abstract and grounded in contextual experience of a specific lesson. These stems shared much with the Fredricks' 2016 work (Fredricks, Wang, et al.), which sought to understand how math and science teachers conceptualized engagement, so the wording in the stems were intentionally close to facilitate comparison between the findings of the studies. For example, Fredricks and colleagues (2016) asked teachers, "What does engagement mean to you?" "What do students do when they are engaged in math and science?" and "What influences student engagement in math and science?" (p. 7). The stems for this inquiry followed a similar line of questioning, but also included contextual references to the observation to elicit detailed and context-laden answers.

There were a few major differences between this protocol and that of Fredricks & Wang study, however. The Fredricks & Wang study chose to examine disengagement as well as student engagement. This distinction was purposefully omitted from the protocol, because neither the goals of this project nor the research questions focus on student disengagement, and the disagreement in the field over the independent nature of disengagement as a construct (Eccles, 2016). Though some researchers view disengagement as a state on an overall continuum for student engagement, others claim disengagement and engagement in learning are completely separate constructs (Jang, Kim, & Reeve, 2016; Skinner, Kindermann, & Furrer, 2008). As the primary investigator, I decided to focus solely on helping understand what engaged learning looks like, rather than include a discussion of disengaged learning. Though

such an inquiry would be valuable without a doubt, it does not have a place in this current study. More discussion of the inclusion of disengagement in student engagement modeling is included in chapter two of this work. In addition, the Fredricks study (Fredricks, Wang, et al., 2016) focuses solely on math and science learning, whereas this work sampled teachers from multiple domains, with the constant factor between them being their level of expertise as practitioners.

One addition was made to the C1 stems after the first interview (Ms. Anderson). After reading her interview, I noticed how our discussion inadvertently included a discussion of a *highly engaged* classroom, based on Ms. Anderson's conceptualization. I found this question valuable when first transcribing and analyzing the response, so I consulted with my advisor and added a C1 question "*Describe for me a highly-engaged classroom.*" As I continued in the process, this question was one of the most productive in terms of helping the teachers explain how they saw engagement. This along with the incorporation of the demographic questionnaire in the CA stems were the only changes made to the protocol, and because Ms. Anderson answered this question on her own, I did not need to go back and pose the question to her again to keep the protocol consistent for all participants.

C2 stems. Finally, this protocol included questioning targeted to determine the contributing factors to teacher knowledge of engagement, which has not yet been a major focus of qualitative inquiry of student engagement.

To help build a theory of how teachers learn about engagement, the questions in these stems tried to pinpoint the sources of knowledge of engagement for each participant. While C1 responses were generally elaborate and long in an attempt to explain often complex and multi-layered understanding of engagement, the C2 responses were fairly straightforward. Teachers were usually able to quickly identify their sources for engagement knowledge.

Data Analysis

Miles et al. (2014) assert that the strongest works of qualitative research establish strategies for analysis before any collection of data occurs. With this in mind, I approached the analysis of gathered data with a clear plan that also afforded flexibility to react to new findings, themes, or hypotheses. Immediately following each interview, I personally transcribed the responses to familiarize myself with the data as quickly as possible (Pope, Ziebland, & Mays, 2000). Transcriptions were then entered into the AtlasTI software program as primary documents in a hermeneutic unit. Transcriptions were direct replications of participants' statements with the exclusion of any "non-words" (e.g. "umm", "uhhh") to help with clarity, and so that they could be more easily understood by readers (Miles et al., 2014). The interviews, along with the observations and lesson reflections, were given identifiers based on each of the teachers' pseudonym, gender, and school in case the information proved enlightening or important during analysis between cases.

The data collected during this inquiry was analyzed throughout the collection process so that a constant-comparative method of collection and analysis can occur (Corbin & Strauss, 2008). Miles et al. (2014) explain that the use of deductive coding is appropriate when the researcher is familiar with the setting, has a pool of "well-delineated concepts," and has a confirming stance along cases/theory. All three of these criteria applied to my interactions with CAPS teachers, so an initial coding list related to existant theory and the qualitative work of Fredricks, Wang, et al. (2016) was used for some of the question stems, specifically those related to teacher conceptualization of student engagement. The Fredricks, Wang, et al. (2016) qualitative study informed the eventual codebook used to begin this work as published by Wang

et al. (2016) in the same issue of *Learning and Instruction*. Each of the codes used by Wang et al., (2016) included placement of codes in overall coding categories of *affective*, *behavioral*, and *cognitive* engagement. I kept the attachment of these categories to the codes, but allowed myself to move the pre-existing codes into new categories as analysis progressed. For example, Fredricks and colleagues (2016) include *Likes Teacher* in the affective engagement category. I eventually moved this same code to an emerging category of *Student-Teacher Relationship/Rapport*.

A more inductive, grounded-theory orientated stance was also implemented in coding. This allowed me the ability to add new findings to the coding list for questions surrounding the definition of engagement, and allowed me to build a novel code list for data concerning the sources of practitioner knowledge about engagement. While I did enter this project with conceptual frameworks to help interpret this data, neither the Jones & Dexter (2014) holistic model nor the IMTPG (Clarke & Hollingsworth, 2002) were used to create pre-set codes during analysis.

Individual lesson reflections and interviews served as the unit of analysis, and these responses were compared across cases to determine trends, themes, and differences among teacher responses. Miles and Huberman (1998) explain that in a cross-case analysis, the cases are “molar units” that share common characteristics. In this study the cases were master secondary teachers within the CAPS district. The purpose of comparing across cases is to help extend external validity by looking for similarities and differences in responses from the cases. Answers to the research questions of this study were gleaned by analyzing trends in the participants’ responses.

The classroom observation data was also systematically coded for analysis. Holistic student engagement during each lesson was recorded along each of the three sub-categories using the observation tool (Appendix B). Lesson activities and instructional materials used during the observation were coded inductively to get an overall impression of how these teachers teach and what has occurred during each lesson.

The observation data was reviewed before each interview to help inform the discussion and add validity to the answers of the participants through data triangulation. My overall impressions for each observation was recorded in ongoing research memos to develop a solid and communicable impression of what occurred based on my notes and my experience as a teacher coach and observer of classroom teaching. The teachers' own reflections on the lesson were reviewed and coded before the interview of each teacher. These notes and summaries allowed me to both make sense of and consolidate the observation data so that it can be used to support the interview data.

Coding

Within qualitative inquiry, the process of coding *is* data analysis (Miles et al, 2014). The data I chose to code and the coding structure itself greatly impacted the assertions I ultimately made at the study's conclusion. The critical nature of coding in this project required a thoughtful plan from the outset to ensure due diligence is observed when handling the project's data.

Observation data. Observation data was coded to inform the interviews and for analysis to help answer the research questions. Each lesson activity received a code of high, moderate, or low engagement along all three components—*affective*, *behavioral*, and *cognitive*. These codes were determined by the percentage of students engaged along all three sub-processes. So a lesson activity could be coded as having high behavioral engagement, moderate affective

engagement, and moderate cognitive engagement. These codes were compiled by case (Maxwell, 2013) and explained in a detailed narrative for each teacher to show how the teacher acted in class and how it related to their construction of engagement. It also allowed me to compare the teachers' overall assessments of their lessons in terms of engagement compared to my own. Convergent analysis between the teachers and me would show that we both see engagement similarly, offering validity to the responses. Divergent assessment could help inform how the teachers' understanding of engagement varied from my own which draws strongly from existent theory. These codes were used to inform the descriptive narratives of my experience with each teacher.

Lesson reflections and interview data. As responses were collected, they were analyzed immediately in an initial round of coding. The lesson reflections followed the exact same coding procedure as that of the interview data, except they were coded before I met with the participants for interview. The first round of coding for reflection and interview data was a predominantly descriptive exercise as recommended by Patton (1990). A pre-set code book was used, taken from the work of Fredricks Wang, et al. (2016). The codebook was created by the research team in a study of math and science teachers and students, asking them about their conceptualizations of student engagement and disengagement. The pre-set codebook for the present study borrowed only the codes related to engaged learning from Fredricks (Fredricks, Wang et al., 2016), as disengagement as a construct was not part of this study's focus. The pre-set code list includes categories for indicators of *behavioral*, *emotional (affective)*, and *cognitive* engagement, each with around fifteen codes. I relied heavily on the Fredricks codes, as they generally covered much of the C2 responses presented by the participants. However, in some cases I had to add or rearrange the Fredricks list. For example, the Fredricks code-book did not include a code for

body language as a part of student engagement, but I saw this code appear in six of the ten answers. I added this new code to my emerging codebook and later assigned the code to an overall category of *behavioral indicators*. The pre-set codebook (Appendix E) alongside my final code book (Appendix F) can be found in the appendix section of this work.

Other codes were added throughout the data analysis process. New codes were recorded *in vivo*, using the language of the participant rather than my own (Corbin & Strauss, 2008; Miles et al., 2014). The use of both pre-set and *in vivo* codes allowed me to keep one foot in the established theoretical literature while also allowing the expertise of these teacher participants to emerge. One of the guiding assumptions of this research was that both theory and practitioner knowledge hold potential value in future understanding of engagement; this approach to coding reflected that belief.

As I coded data, I worked toward the creation of a master codebook. I coded as I collected data, and I merged and synthesize some codes even before the data collection was complete in an attempt to hone my analysis concurrent with the collection of data. This process followed the constant-comparative philosophy of data analysis (Boeije, 2002) and helped me to have a stronger understanding of the data as collection progressed. The codebook was organized by research question, and then categorically, with codes falling under each thematic category. When using codes from the pre-set list, I removed their original parent categories of *affective*, *behavioral*, and *cognitive* engagement as organized by Fredricks, Wang et al. (2016). Instead, I looked at each code independently and allowed natural categories based on my own data to emerge. These codes were given alphanumeric designations to keep the data organized and clear. They will be based on the response's assigned research question (e.g. "C2" for a code in

Category 2-Sources of Engagement Knowledge), code category (e.g. “1” Experience). In vivo examples were also included in the book to help guide consistent coding.

For example, research question three asks, “What are the sources of teacher knowledge surrounding student engagement?” When Mr. Dawson explained he learned about engagement partially from “Talking with teachers down the hall during hall duty... we talk about instruction and engagement.”, the following quote was coded under the parent category of *C2.2 Peers*. This category includes all codes related to peer-to-peer learning of engagement. The two major codes comprising this category were *C2.2.1 Observing Peers*, and *C2.2.2 Talking with Peers/Co-Planning*. I coded Dawson’s answer as *C2.2.2 Talking with Peers/Co-Planning* using the finalized codebook and categories.

C2 Quote- Dawson: “Talking with teachers down the hall during hall duty... we talk about instruction and engagement”				
Abbreviation	Research Question	Code Category	Code Number	Example
C2.2.2	C2- Sources	Peers	2.2- Talking with Peers/Coplanning	“I talk about it with teachers in my building.”

Figure 3.3 An example of codebook usage.

With codes established, I then moved to pattern coding (Patton, 1990) by indexing all reflection answers and interview transcripts using the completed list- adding or changing the descriptive codes assigned during the initial round. Several rounds of pattern coding occurred during this process as recommended by Miles et al. (2014). Throughout this process I read and re-read the data with the codebook as it narrowed and honed to best fit and describe patterns in the data.

The process of coding continued until the transcripts could be repeatedly read without the need for the addition or subtraction of codes (Miles et al., 2014). When this was achieved, I

charted and rearranged quotes according to their code rather than the corresponding interview transcript. The frequencies and patterns of the codes assigned to each response were then examined. These patterns were then compiled into data tables, showing each participant as a row with coding parent categories as columns to see the data holistically and begin to draw overarching conclusions.

Data Saturation. As I collected and analyzed the data, I also focused on examining the data for saturation. *Saturation* occurs in qualitative research when there are “no significantly new explanations for data” (Miles et al., 2014, p. 99). The selection of experts for study (Trotter, 2012) and the use of purpose sampling within the case (Guest, Bruce, & Johnson, 2006) often allow researchers to achieve data saturation more quickly, and both of these methods were incorporated into the study’s design. One way to determine if saturation has occurred is to note when there is “little or no change in the codebook” after ongoing interviews (Guest et al, 2006, p. 65). As my codebook became more clear and themes began to show, I found that after the seventh interview (Ms. Gray) I was adding fewer and fewer codes to the C1 and C2 codebook.

While the inclusion of more participants might have added further richness, I did not feel it necessary to speak with the district and contact more teachers to try to gain more participants. Through my process of multiple data collection methods, with observation, reflections, and interviews, I was able to glean much more information from these teachers about student engagement than I had anticipated. In addition, towards the final observations, reflections, and interviews, I was seeing relatively few new trends in the data or additions to coding themes related to the research questions. This was fortunate, because my initial protocol used waves of data to deal with an *excess* of participants; I did not intend to send repeated requests through the district to NBCTs unless absolutely necessary. Ultimately, I felt that ten expert participants for

this study was a suitable sample size. Their knowledge of engagement was extensive, and my interactions with them allowed me diverse data sources. I was able to do justice to the detail they provided me during these interactions while also involving multiple professionals with different experience and beliefs.

Interpretation and display of data

The entire data collection process yielded detailed and complex responses in all ten cases. After the data was collected and coded, I relied on two major strategies to help consolidate the data into useable conclusions and answer the research questions.

Narrative Descriptions. The first strategy was to look at each case individually, in great detail through the creation of a rich narrative description which summarizes, highlights, and explains each participant's responses to the first two research questions. Data re-presentation in the form of descriptive narratives allows the researchers to organize and retell findings in a way that leverages the rich detail that can be gathered during qualitative inquiry "in a way that best fits the data." (Sandelowski, 2001. P. 339) These narratives treated each participant as his or her own theorist of engagement and will draw from all three data sources of observation, reflection, and interview, to: (1) explain each teacher's context, (2) summarize my observation of their practice, (3) highlight the teacher's understanding of engagement, and (4) identify the source of his or her engagement knowledge. During my construction of these narratives, I avoided cross-case comparison of the data with only a few exceptions. Instead, I focused on describing in-detail the experience of each professional as related to their understanding of student engagement.

Data Tables. The second strategy was to design table displays for each research questions that included all ten cases and the thematic categories for their responses based on the final coding categories. Table displays are used when the researcher needs to "highlight the

variable properties and/or dimensions of one key construct of interest”—a method of summarizing qualitative data that aligns with the goal of the research question (Miles et al., 2014, p. 171). These tables allowed me to compare the teachers across cases and derive overall answers related to the research questions. To answer the first research question (How do master teachers conceptualize student engagement?), I constructed a data table with each teacher as a row within the table. The columns included a short summary of the teacher’s in vivo conceptualization of engagement as well as each of the thematic categories developed through analysis of codes related to the research question. These categories were ranked in order of most included to least included theme in the teachers’ constructions. I then identified which categories applied to each teacher’s construction of engagement, so that data could be seen by case and by category. I followed a similar method with a table related to the second research question (What are the sources for teachers’ knowledge of student engagement?). Each teacher was again listed by row, and the columns comprised of in vivo summary of the teachers’ response to the interview stems related to this research question, and each of the thematic categories developed through the coding process.

To answer the third question, (How do NBCTs’ conceptualizations of engagement compare to current theory?) I again used each teacher as a row in a data table. In this case, each column lists the major theories outlined in the literature and explained in Chapter Two of this work. I then used the narrative descriptions of each teacher and their responses according to the categories within the data analysis table for research question one to determine how the teachers’ understanding aligns with each theory. These tables will be included and explained further in chapters four and five of this work.

Validity of Research

The case for validity in qualitative research is one of much discussion among its methodologists. I concur with Maxwell (2012) that validity is a commonsense mindset recognizing and accounting for threats of invalid conclusions made about the data. Claims made by me as the executor of this study have the potential to be vastly different if the same process was undertaken by another researcher. Two possible threats to validity of qualitative inquiry are *researcher bias* and *reactivity* (Maxwell, 2012). The current study addressed both bias and reactivity using a variety of strategies. My own beliefs as a researcher and my reaction to situations during research and the collected data could have led to unsupported conclusions. I made conscious attempts during the data collection and analysis process to proceed with a heavy dose of humility as a researcher, while employing specific strategies used in traditions of qualitative study to reduce these threats as much as possible.

Rich data collection. The depth of and richness of collected data bolsters the validity of any claims made during analysis. Maxwell (2014) notes that practices like verbatim transcripts and depth of interview questions lead to the collection of rich data and help provide stronger ground for final conclusions in qualitative inquiry. I used the observation tool to record occurrences in the classroom, teacher behaviors, and possible evidence of engagement; likewise, I incorporated the teacher's own assessment of the lesson into the data through the written reflection. The interview protocol made frequent use of follow up questions, probing questioning (e.g. asking participants to provide examples or describe interactions), and context-based questions that are informed through observation to collect data that is detailed, specific, and productive. By observing teachers, I did not only use their beliefs to guide theory, but also their actions in the classroom. By allowing them to comment on their own lesson, I took advantage of context and their own introspection to encourage richer data (Miles et al., 2014). In

addition, all interviews were transcribed verbatim in an effort to ensure richness of data. These measures added to the validity of the claims and ultimate utility and usefulness of the findings for other researchers and educators. The following strategies served as safeguards against validity threats throughout this process.

Triangulation. Triangulation refers to the collection of data using multiple instruments from a variety of participants and contexts (Maxwell, 2014; Miles et al., 2014). Data gathered in this study was triangulated through observation of the teachers' classroom instruction as well as their own reflections and interviews. If I witnessed any discrepancy or continuity between how the participants teach and how they said they teach, it was noted in the analysis to help inform and enrich any arrived upon conclusions. Interestingly, the teachers' assessment of their lesson was, in every case, closely aligned with my own in terms of student engagement. In all cases but two (Gray & Jackson) both the teacher and I believed the class to be highly engaged on multiple levels. In the cases of Gray and Jackson, each instructor mirrored my assessment that engagement was low at certain points, so even in the case of low engagement, the teachers and I had a similar understanding. Because I used this observation instrument, along with the independent lesson reflection, and interview, I was able to draw conclusions from multiple data sources to obtain a clear picture of the teachers' understanding of the construct.

Replication of findings. Just as collecting data through multiple instrumentation helps add to the validity of claims, findings from one piece of research can confirm the conclusions of another to support the conclusions of both works (Miles et al., 2014). In this study, I approached a similar question as the Fredricks, Wang, et al. (2016) study of math and science teachers and students; one that used interviews to determine how teachers and students in math and science classes conceptualize engagement. I used semi-structured interviews in the same way as the

previous study, thereby implementing complementary methodological approaches. I also used their work to frame the pre-set code list and apply the list to a new population of teachers—in this case master teachers as opposed to math and science teachers.

Negative case analysis. In his discussion of validity in qualitative research, Patton (1990) explains that “where patterns and trends have been identified, our understanding of those patterns and trends is increased by considering the instances and cases that do not fit within the pattern” (p. 34). This study sought to enhance current theoretical understanding of engagement by gathering expert practitioner knowledge of student engagement and comparing it to conversations within the literature. A close and thoughtful analysis of all responses gathered during data collection was valuable in this endeavor, but special consideration was paid to any negative cases that did not fit the pattern of other responses or existent theory. Rather than avoiding potentially contradicting findings, validity was supported through recognition and discussion of any alternative hypotheses or constructions of engagement provided by the teachers. Miles et al. (2014) and Maxwell (2013) agree that a consideration of “unpatterns,” outliers, and discrepant evidence through a close examination of negative cases is an effective strategy in supporting validity of methods and analysis. I made special note of negative cases as they appear throughout the research and compared them to trends in the data and the various theoretical constructions of engagement, especially the ABC multi-dimensional model proposed by Fredricks (Fredricks et al, 2004). Not only did this approach support the case for valid findings, it was a critical part of increasing the presence of practitioner voice in current conceptualizations of student engagement. My analysis of Ms. Cook’s belief that student control over the learning environment, a theme not present in any other answers and only in the

construct of *agentic engagement* (Reeve, 2011), is an example of how I used negative cases to inform the findings and ensure validity in conclusions.

Member checking. Maxwell (2013) notes that the practice of member checking is the single best strategy for ruling out misinterpretation of participants' as well as identifying and correcting research bias during observation. Miles et al., (2014) confirm the importance of member checking when possible, but add that a concrete plan should be designed before collection otherwise in order to ensure the checks actually occur. All participants had the opportunity to review the transcribed interview and confirm their answers before coding occurred in an effort to ensure that all their answers given in the moment corresponded to their beliefs upon review. Ms. Gray elected to make several changes in her response, and the other nine felt that their responses accurately reflected their beliefs. In either instance, the use of member checking allowed me to proceed with confidence that the participants did in fact hold the beliefs expressed in the interview.

Outside coder calibration. It is a common practice for teams or pairs of qualitative researchers to independently code the collected data and compare and discuss their classifications (Patton, 1990). As the sole researcher in this project, I was not able to fully leverage this strategy throughout the process, but I did make use of other scholars to check and develop my coding process. As I coded the first wave of interviews, I asked a fellow graduate student, on who is experienced in qualitative research, to review and critique my coding of data to help calibrate my system and develop as strong a code book as possible. His feedback was recorded in memos and helped me develop the final codebook to provide additional perspective and thought throughout the process. I also asked this colleague to check my process and ensure that I was not overly allegiant to one theory- especially the ABC Theory that aligned with my

pre-set codebook. While he mostly agreed with my codes and felt that I was fairly assessing the responses without relying too much on any one theory, our conversation helped to validate my method and conclusions moving forward.

Research Memos. Research memos can help guide, shape, and enhance qualitative inquiry throughout the entire process of study (Maxwell, 2013; Miles et al., 2014; Patton, 1990). By cataloguing and transcribing all memos during collection and analysis, I drew upon an additional well of information to help support and enhance the trustworthiness and power of any conclusions made during this study. They were a critical piece in this study, as they fostered reflective thought and thorough and thoughtful analysis of data trends.

Institutional Review Board (IRB) and CAPS Approval

This work was fully approved by the Institutional Review Board of Virginia Commonwealth University (HM20009372) before data collection began as well as the CAPS Division of Research and Planning, and the proposed study reflects all necessary revisions directed by the division.

Chapter Four: Results

In reporting and communicating the results from this project, my approach is two-fold. First, I describe my interactions with the teachers one by one, in the order I observed and interviewed them. Within these descriptions I include a summary of their context, observed lesson, and interview. The interview portion of these descriptions also includes responses offered in the lesson reflections completed by the teachers on their own. This part of the narrative does not explain the interview as a whole, but rather groups the responses in relation to the first two research questions. The first question addresses how each teacher conceptualizes engagement and the second identifies the sources of this knowledge. I have also included a table outlining demographic and contextual factors related to each teacher at the beginning of the narrative along with a single quote from their interview. I chose quotes that highlighted the teacher's feelings about engagement itself rather than one necessarily targeted toward a specific research question. This allowed me to include meaningful and interesting quotes that may have otherwise been left buried in transcripts, because they did not directly relate to specific aspects of student engagement guiding this project. Thus for each teacher I provide a: quote, descriptive table, and a description of instructional context, my observation, teacher conceptualization of engagement, and his or her sources of engagement knowledge.

After the descriptions, I address each of the first two research questions through the thematic categories extracted from the data after cross-case analysis. As explained in chapter three, these categories were developed through a careful and repeated examination of common

themes between codes and the continuous merging of complementary data. The individual codes came both from the initial codebook and in vivo codes generated by participant answers when the initial codebook failed to describe the data. My final codebook and these categories can be found in Appendix F.

For the cross-case analysis, I created analysis tables for each of the first two research questions. This process was not just a methodological one, it allowed me understand how findings extracted from each teacher related to those of the group. Teachers conceptualized student engagement along seven distinct thematic categories and identified eight types of sources for this engagement knowledge. Each of them is explained in my cross-case analysis within this chapter. While within the descriptive narrative, I do my best to keep as much of the data true to the original wording and meaning as those provided by the teachers, in the cross-case analysis I show how the teacher’s answers relate to the group’s themes.

Narratives

Dr. Anderson

“The truth is, as you become a reflective teacher, it’s all about engagement.”

Table 4.1

Dr. Anderson’s Professional Context

Gender	School	School SES	Grade Levels	Subject Areas	Years of Experience	Years at Current School	Highest Degree
Female	Jackson MS	Mid-poverty	8 th	Math	29	11	PhD in Educational Leadership

Dr. Anderson started teaching immediately after college and went on to achieve a master’s degree in Educational Leadership, followed by a PhD in Educational Leadership, all while teaching. She explains that she “doesn’t like to sit still” when it comes to bettering herself as a teacher. She has worked in various locations but came to Jackson Middle School eleven years ago where she teaches in the IB program as a Math teacher. In addition to her experience

as a university student and professional, she also teaches college courses in instructional subjects like school law and teaching methods. Jackson Middle's student population is diverse in ability level and SES, because it houses a magnet IB program as well as students zoned for the school. Most of Anderson's classes have been within the IB program. She also serves the school by coordinating the teacher mentor program and leads frequent staff development lessons for her peers.

Observation. I visited Dr. Anderson's class in the middle of a Monday lesson. As it was the first of my observations, I was interested to see how much I could glean from entering a class with no previous relationship with the teachers or students. It did not take long to see that Anderson was a very engaging instructor and her students seemed very invested in their learning. The lesson began with them reviewing homework as a class. She alternated by calling on specific students and choosing students with raised hands. I counted twenty-four students in the class, and within the first ten minutes, I was astonished to see that she had called on every student at least one time. The students seemed eager to check their work—I later learned they were preparing for a quiz at the end of the block. After this activity, students had time to study for the quiz. They spoke quietly in pairs while Dr. Anderson circulated the room talking with each student or pair. Before she handed out the test, she led another short review of the content, going over calculator functions, major formulas, and ways to solve certain problems. The students seemed engaged through their interest and enthusiasm in class, participation in the lesson sequences, and the verbal answers they provided showing deep thinking. They were especially focused on trying to understand processes in mathematical sequences and would interact with the teacher to see if their method was correct. In her assessment, Dr. Anderson agreed that students were engaged, especially because of the impending quiz and the students' general positive feelings towards

Math and her as a teacher. As it was my first observation, I noted our agreement in a memo afterwards and saw it as a sign that my observation tool, at least in this case, provided a decent picture of student engagement during the lesson.

Conceptualization of student engagement. Dr. Anderson felt strongly about the subject of engagement, but explained “engagement is something you know you have...when you see it” and that “[her] classroom is [her] own, and what [she does] might not work for other teachers.” Even with this in mind, she articulated her construction clearly, and her answers followed five major patterns for engaged learning. Engaged students:

1. want to do the work,
2. participate in the lesson and demonstrate attentive body language and eye contact,
3. are having conversations with one another and the teacher,
4. put in extra time and effort to understand a topic or fix mistakes,
5. and have a positive relationship with the instructor.

She remarked her students often ask for more time on work but demonstrate to her a real desire to learn and master the content. For her, this drive is a part of highly engaged learning:

They might say, ‘I didn’t finish. Can I bring it in first thing in the morning?’ And I see from this that they are willing to put in extra time because they aren’t satisfied with what they’ve got. They want to prove to me and prove to themselves that they can do it and they are willing to put in extra time.

This quote shows several of her major themes that appeared consistently in her interview.

Anderson first values student desire to work as a part of engagement. In addition, the quote references the importance of her relationship with students—they not only want to do the work, but also they want to prove *to her* that they can do it. Her close relationship and knowledge of students was a constant theme in my observation notes and her interview. She explained that her students “learn to connect with [her] through a lot of avenues” and she values this feeling of

connection as a part of engaged learning. A playful back and forth between her and the students is important to establishing this feeling. She knew students were engaged when they were “laughing at [her] jokes or teasing each other with [her].” The quote also shows her belief that highly engaged learners will recognize mistakes, and put in extra time and effort to achieve understanding. This willingness to put in extra time was later noted to be “a big part of engagement” and “a big manifestation of engagement.”

Besides students wanting to do work, their close relationship with the teacher, and willingness to put in extra time and effort, Anderson saw student participation and conversation as major elements of engaged learning. She explained that engaged students showed their attention through body language and eye contact and participated throughout the lesson—staying on task and focused. In addition, conversations or “banter” were frequently referenced as important pieces to fully engaged learning. She uses this “piggybacking on each others’ ideas during discussion” as a major indicator of engagement in her lessons.

Sources of engagement knowledge. While most participants listed several sources of their engagement knowledge, Anderson only cites one contributing factor to her own. For her, teaching experiences and the reflection on those experiences are the sole source for her understanding of the topic:

When you see [engagement] you know it. I think most people in my position would say you just get better and better at recognizing it or striving for it. I was like every other new teacher, I thought if I delivered a lesson, that I could go home. I was done, you know? The truth is, as you become a reflective teacher, it’s all about engagement.

As I went through each of the question stems targeted at gathering sources of engagement knowledge, she never wavered from this theme. She remarked that her teacher prep programs did not give her a working understanding of engagement and explained that in her building she believed “everyone shoots for it and the benefits of student engagement,” but, despite this

emphasis, she consistently cited experience and reflection as her main teacher on engagement. Interestingly enough, Anderson has the highest degree of any of the participants and even teaches methodology classes at the collegiate level. While she has developed a rich understanding of engagement, she has never been exposed to a specific theory of it, nor does she seem to value classroom learning as a source for engagement knowledge over practical experience.

Ms. Brown

“Oh yeah- I think student engagement is major. It’s one of the big pushes right now!”

Table 4.2

Ms. Brown’s Professional Context

Gender	School	School SES	Grade Levels	Subject Areas	Years of Experience	Years at Current School	Highest Degree
Female	Polk HS	Mid	9-12	Business and Marketing	14	11	BS Business

Ms. Brown is the only teacher of elective courses in this study. She is a career switcher with fourteen total years of experience in the teaching profession and nineteen in the business world. Using her professional expertise, she teaches business classes at Polk High School. The student population of Polk has been changing over time—while its students once came from the wealthiest families, it now draws from increasingly diverse neighborhoods in terms of ethnicity and SES. Almost one quarter of the Polk students are now reported as FRL (24%). Brown teaches a variety of what professionals call “preps,” or courses, throughout the year, including Economics, Personal Finance, Principles of Business Marketing, Accounting, Business Management, and Business Law. For teachers in this district, this number of preps would be considered very large, and I know from my work with CAPS that it would take a great deal of planning and organization to manage such a large course load.

Observation. When I observed Ms. Brown's lesson, it was midday at the end of the week. Her lesson was cleanly divided into four distinct activities with expressed transitions. She later wrote in her reflection, "My lesson was fast paced to move from activity to another to keep their attention." She focused most of her energy during instruction in providing clear expectations of behavior and facilitating systems that monitored participation. At the beginning of class, students read an article about business ethics and completed a table helping them analyze the writing. Afterwards the class discussed the article as Brown asked questions and called on students. I noted that all students were on task but did not see much evidence of positive affect through expression of excitement or enthusiasm or cognitive engagement through evidence of deep thinking or connection of ideas. She then showed the students a video outlining acceptable and unacceptable workplace behaviors. Here the student energy level rose as they laughed and remarked upon the unacceptable behaviors, which were presented in a funny "don't do this" style. Finally, she had all students use the Kahoot student response program, where they competed with each other answering live questions on their computers. Kahoot keeps track of the students' answer choices and response times and gives them scores while presenting a ranking list of highest scorers in the class. I made note of the high level of student enthusiasm and participation on this task, and Brown was able to ensure that every student was answering every question in time through the use of the program.

Conceptualization of student engagement. During my research memo after interviewing Brown, I reflected upon the similarities between her conceptualization of engagement and her teaching style during my observation. Both focus heavily on behavioral indicators, with an inclusion of student interest and excitement. Neither her definition nor her teaching style focused much on cognitive or social factors, though I do believe her students could

be seen as engaged along those elements due to Brown's organized and clear delivery of instruction.

Brown believes that engaged learning incorporates two things:

1. student interest,
2. and student participation

When I asked her to define engagement, she said, "Well the students, you want them paying attention- number one, and participating. If you're doing an activity you want them involved in the activity." When she looks for engagement she uses eye contact and completion of work to see the students' engagement level: "When I gave them the table, I asked them to read and research the article. So I walked around the room and could see who was filling in the table, and this was one of my cues they were participating."

She also mentions interest, especially in reference to the video shown during the observed lesson. I asked her what part of the lesson was most engaging and why. She replied,

I feel like they were interested in the video. They liked it because—it was called "the Good, the Bad, and the Ugly"—they were kind of interested in the bad things... so they seemed intrigued with that and watched that, and that was the most engaging.

This was one particular instance where I was grateful for the shared experience of the lesson between the participant and me. While most of her construction of engagement was behavioral when providing an abstract definition, when referencing the grounded lesson, she emphasized the importance of interest and positive feelings in engaged learning.

It is also worth noting that Brown *did* offer a few instances that were coded as cognitive or social elements of engagement. She mentioned that students should "be able to teach each other" which would be a part of cognitive engagement according to the Wang and Fredricks Codebook (Wang et al., 2016). She also mentioned that students interacting with one another

help them stay engaged, which could be considered evidence for social engagement. However, these two examples were overshadowed by her explanation of behavioral and affective factors based on student interest, and I did not feel like their inclusion would accurately portray Brown's construction of engagement.

Sources of engagement knowledge. When asked about her sources of engagement knowledge, Brown replied, "You know I haven't sat down and studied this like you have, but I would love to know more!" According to Brown, most of what she knows about engagement comes from:

1. the National Board experience,
2. and being observed by administrators, content specialists, and peers.

When I asked her where she learned about engagement, she replied,

I would say National Board definitely. It was the biggest thing that helped me to tune in on it. I think I did it before, but I don't think I was as tuned in to noticing different aspects of lessons.

I followed up to see if she was exposed to a definition or theory of engagement during this process, but she indicated that she "never learned one theory or anything like that." The other major source came from being observed by other professionals. It is worth mentioning that the observations described by Brown were one-way, with her as the *observed* teacher and not the one conducting the observation, as would be the case in many subsequent interviews. Brown explained that principals, content specialists, and other teachers will come to the room and "sit in the back of the room and put in your observation that the kids on the third row with the red shirt was doing this. So that makes you pay attention a little more." I later reflected that she only reported being assessed on engagement through behavioral factors as well, and that this emphasis paralleled her own reliance on behavioral factors in her construction.

Ms. Cook

“I think as teachers, we need to focus most on how to get our students engaged, and what can we do to make our subject matter interesting to them, and how can they relate to the real world. I think if your kids are engaged, eventually achievement will come.”

Table 4.3

Ms. Cook’s Professional Context

Gender	School	School SES	Grade Levels	Subject Areas	Years of Experience	Years at Current School	Highest Degree
Female	Polk HS	Mid	9	English	8	7	M.Ed. Teaching

Ms. Cook is the youngest participant in the study; she has eight years in the profession and began teaching immediately out of college. She teaches English at both the honors and standard level to ninth graders and advises the school’s yearbook class. The district has recognized her with multiple CAPS 21 awards for exemplary lessons. Like Ms. Brown, she also teaches at Polk HS. She completed her National Board certification just four years ago and entered the NBCT program at the earliest possible opportunity—CAPS does not let teachers work towards their certification until they have taught for five years.

Observation. I observed Ms. Cook’s honors level English class during a morning block in the middle of the school week. When I began my observation, students were completing a reading quiz on Homer’s *Odyssey* using their laptops while Ms. Cook circulated the room. Cook then assigned the students to groups of three and directed each group to complete worksheets asking them to identify and apply conventions of epic poetry to the text. She continued to constantly move around the room and checked in, questioned, and prompted the small groups. The groups remained on task during the entire block with little to no evidence of off-track behavior or conversation. The students seemed to enjoy working together and participated in a great deal of self and peer-direction and teaching. The worksheet questions relied heavily on application of knowledge, and I noted in my observation very high levels of engagement on all

three scales. I worked to find an off task student during this lesson and could not. When I reflected upon the observation, I made note that I believed this to be an exceptionally engaged classroom according to my rubric. I later asked Cook whether she thought her students were engaged and she replied definitively,

One hundred percent. I'm not sure how it worked out that the lesson you observed, one hundred percent of them were engaged, but I think that is the result of consistent expectations and practice throughout the year.

Conceptualization of student engagement. Cook's understanding of engagement contained a multitude of cited factors. Her answers fell into five elements of student engagement:

1. interest and enthusiasm,
2. attention and on task behavior,
3. discussion and peer interaction,
4. control over the learning environment,
5. and belief that the learning was relatable and meaningful.

In regards to interest, Cook stated, "A highly engaged classroom is where the students are enthusiastic and interested in the subject matter... highly engaged comes down to enthusiasm and then understanding the topic and being interested." Even when discussing other elements of engagement, the importance of student interest was generally woven into her narrative. She then referenced on-task behavior and paying attention as necessities for engaged learning throughout the interview. This connected well with my own observation where students were unquestionably on task throughout the lesson. Social interaction was a critical piece of her construction as well. Not only did I see this piece in the small group work, but also she explained her reliance on an "expert peer" approach to small group instruction that, for her, was key to engaging her learners:

I put them in groups where there is a strong student, an average student, and a weaker student, and, in watching how that works, I am a firm believer in the expert peer and how much that helps. I could hear my expert peers leading the conversation and asking questions and explaining what was happening. This is a big part of a highly engaged classroom for me.

She also explained that in a highly engaged classroom students “bounce ideas off each other” and “are talking and listening to their peers.”

Of all the participants, Cook was the only one to explicitly emphasize the role of student control of the learning environment as an element of engagement. In her initial definition of the term, she explained, “Student engagement is when students are in control of their own learning and actively pursuing their own answers.” She again uses control when discussing her decision to use small groups in instruction: “The kids are more comfortable in smaller groups. They feel in control and that they have responsibility and their conversations are just so much better.” Finally, Cook made frequent reference to the need for students to see the learning as relevant and make connections: “I think connections—all of these things I’ve said together make student engagement- but the highlights of my day are when students can make connections to an outside source.”

Sources of engagement knowledge. Cook pointed to four primary sources for her knowledge of student engagement:

1. her mentor teacher and co-planning team,
2. her classroom experience,
3. the National Board process,
4. and a non-beneficial recognition of engagement in grad school.

I asked her, “Where do you think you learned the most about student engagement?” She replied,

I think a lot was because of my mentor. She has been teaching for fifteen years, and she’s taught 9C, 9 Collab (two levels of ninth grade English), and she’s the journalism advisor.

She was my mentor since day one. She’s given me lessons and we have grown as educators.

Cook later explained that during lesson planning with her mentor “[they] incorporated technology and talked about engagement a lot.” She then continued listing sources and reflected, “I do remember learning about it in my college... but because I wasn’t in a classroom, it didn’t really click.” She later stated, “Being thrown in the classroom is where you learn the most about engagement.” Finally, she made brief reference of the NBCT process as a source, but provided little elaboration as to how exactly it impacted her knowledge.

Mr. Dawson

“There are a lot of look-fors that you can identify that aren’t what a lot of teachers would expect and not the excuses a lot of teachers sometimes give. Yes, you can generate engagement in your classroom.”

Table 4.4

Ms. Dawson’s Professional Context

Gender	School	School SES	Grade Levels	Subject Areas	Years of Experience	Years at Current School	Highest Degree
Male	Ford MS	Low-poverty	7 th & 8 th	Science	17	6	M.Ed. Educational Leadership

Mr. Dawson currently teaches collaborative physical science to seventh graders and honors earth science to eight graders at Ford Middle School. He has worked with the CAPS district for seventeen years, teaching first at the high school level then moving to middle school. He earned a degree in Educational Leadership, but he “liked teaching too much” to pursue administration further. Dawson is one of three participants in this study to work at Ford Middle School. While some schools in the district have only a few or no NBCTs, Ford Middle has actively encouraged professionals to pursue the program. They have at least six NBCTs on staff according to the three participants. In addition, the school as newly opened in a high-income area of the CAPS district seven years ago, so many teachers applied to transfer and work in the new

school. Participants from Ford make frequent reference to the collegial culture in the building, and, as a teacher in the district, I was already aware of its reputation for having a high number of innovative teachers. Dawson has been at Ford since it opened and is currently the department chair for the science department. He leads summer staff development courses on collaborative teaching and teaching of collaborative physical science.

Observation. I observed Mr. Dawson's class midday in the middle of the week. His students were working in small groups for the entire block, preparing for a whole class debate that would take place on Friday. During this activity, students used laptops to access debate guidelines and topics posted online by Mr. Dawson. He circulated the room, checking in with each group multiple times throughout the activity. Students were largely self-directed at this point and worked together to research and answer questions. The majority of their conversations appeared on topic, and the room possessed a palpable energy. Dawson's style was both relaxed and deliberate. He had fun interacting with students, often laughing and joking, but never stopped his progression of check-ins during the entire block. He would alternately ask questions like "Aren't you excited to be in this group!?" and then "What are the by-products of your resource, and how might another group come at you on this issue?" Often he spent time prompting students with challenging questions or asking them to anticipate "attacks" from other groups. The debate was on the use of various natural resources, and each group was in charge of defending the use of one resource over another. During this activity, I heard many examples of students thinking deeply and applying knowledge to their task through their conversations. I also noticed almost all students were on task despite the presence of the teacher. Dawson agreed that he often wants his classroom to continue to run "even if [he] grab[s] a student to discuss

something outside in the hallway. The rest should almost not even notice if they are really engaged.”

Construction of student engagement. To Mr. Dawson, student engagement needs to incorporate five things according to his lesson reflection and interview: Students must:

1. be interested in the learning,
2. complete the assignments and stay on task,
3. interact with peers and the teacher,
4. take the learning further,
5. and feel that the learning matters to them.

Dawson believed interest mattered for his students especially in relationship to certain activities and topics. He said, “I think if you get them and you put something in front of them and it’s something interesting that they are going to invest the time and energy so they will do a good job with it.” He also explained in his lesson reflection that the debate activity was engaging in years past because “the nature of debate lends itself to student engagement as many students enjoy the process of debating.” Though he wants students to “feel like they are doing something because it’s interesting,” he made many references to wanting to see students “actually doing the assignment” and “quickly setting to work on the task.” These indicate a presence of behavioral indicators in his construction as well. For his third theme, Dawson stressed the importance of social interaction in engagement. I asked him to explain what highly engaged learning looked like. He said, “I kind of feel like it’s going to look chaotic...you’ve got kids working together, certainly that ‘together’ is important.” When looking for engagement, he also mentioned, “I want to see them interacting with each other. I want to see them interacting with *me*.” My classroom

observation seemed to support these statements as the instructional set was entirely focused on group work peer teaching, and student interactions.

Mr. Dawson also repeatedly referenced the idea that engaged students are willing to extend their learning independently. He noted, “I want to see them finding ways they’ll be able to take that assignment and go further than I asked them to.” Admittedly, I was fascinated as a fellow teacher when he explained his homework structure and how it related to this idea of students extending their own learning. Dawson gives students a “homework menu” where they choose different activities to add up to a total amount of points each unit. Some are remedial, others review, while others are under “an enrichment portion.” He explained,

I found that when I put this on there and the kids got to pick what they were doing, they started doing *more* homework than I was assigning! I found that I was assigning 30 points, but kids were turning in 40 or 50 points of work, and I feel like that has helped them be more engaged with that sort of work

Finally, Dawson continued to stress the importance of student perception of meaningful and relevant learning in overall engagement:

It’s a connection to the real world, it’s something they care about, and it has something they are able to connect to their other classes and that they may see value in it. Not because I told them that it’s important, but because they see a reason to do this.

The above quotation comes from his response to the first question asking only “How would you define student engagement?” Though he referenced these sorts of connections again in several instances, I think this response best encapsulates his perception of this element of student engagement.

While not a part of his initial discussion of his construction of engagement, later in his interview, while discussing the sources of his engagement knowledge, Dawson made a reference of particular importance to the existing literature on student engagement. He was talking about

his principal at Ford Middle and the principal's impact on how Dawson sees engagement. During this discussion, Dawson noted,

Frequently [the principal] will have post observation conversations with us about 'how do you know your students are engaged, and what's the difference between *engaged* and *compliant*? And I feel like I have the right answer in my brain already, but I think a lot of my colleagues- that causes them to think a little bit.

Immediately I perked up at this part, recognizing the terminology from the Schlechty (2011) framework for engagement. I waited for him to finish his response about sources but later asked him to elaborate on this difference. What did he think differentiated fully engaged learning and compliant learning? He replied,

What I've been telling you about engagement- that's the engaged answer. And then the complaint answer will be- they are all sitting at their desk. They are all behaving appropriately. They are all completing their work. I think that the complaint answer is they are doing it because they have to, not because they want to

As he stated, Dawson had already given many elements to his own construction earlier in the interview, but he notes that some of his colleague may confuse engagement with compliance. The Schlechty model (2011) centers on the intersection between a student's attention and commitment. According to the model, fully engaged students are committed to the learning goals and paying high attention. I do not think Dawson would disagree with this statement, but he includes many other elements like interest, perceived relevance, and social interactions in his understanding of engagement. However, Dawson's assessment of compliant learning is right in line with the Schlechty Theory where compliant learning occurs when students are attentive but do not share the instructor's goals for learning. They complete their work but don't necessarily care, show interest, or focus on the actual absorption of content.

Because Dawson referenced his previous explanation of fully engaged learning when comparing it to how others might confuse compliance with engagement, I did not think it

appropriate to connect his construction to the Schlechty model. This inclusion does, however, support my initial prediction that the Schlechty model is more practitioner-situated than other models and my feeling that it could be referenced in interviews. It is unclear whether or not the principal uses this model or simply uses the words engaged vs. compliant, but this distinction appeared again when I interviewed Ms. Gray at another school. When ultimately discussing the usefulness and validity of the Schlechty theory, I will use Mr. Dawson's response to inform the conclusions.

Sources of engagement knowledge. As Dawson walked me through the sources of his knowledge of student engagement, his answers followed three themes:

1. his principal,
2. his experience,
3. and the NBCT process.

As I mentioned earlier, the principal at Ford Middle conducts frequent observations of the science department. Included in his observation is a post observation conference, which I know to be standard practice in the district. According to Dawson, the principal will often ask teachers to provide evidence of engagement, and sometimes follow up with a discussion about engaged learning vs. compliant learning. Later, Ms. Frank, another science teacher at Ford Middle, also referenced the principal's focus on engagement as a source for her knowledge but did not mention the engagement vs. compliance question. In addition to the principal's influence, Dawson described his engagement knowledge as stemming from his experience where "if you linearly plot it over the course of the year, over the years, it is gradually sloping upwards." He explained that "experience and the NBCT process" were major contributing factors in his understanding of engagement. The NBCT process, the third theme in his answer, was said to

“make you think about every single thing you do,” and this close examination of practice led him to better understand engagement.

Ms. Engle.

Well I do recall maybe in my first couple years teaching just throwing the term out there—“we need to engage our students more!” But as a new teacher, you’re kind of wondering, could someone actually help me figure that out?

Table 4.5

Ms. Engle’s Professional Context

Gender	School	School SES	Grade Levels	Subject Areas	Years of Experience	Years at Current School	Highest Degree
Female	Monroe HS	Low-poverty	10 th	English	9	9	Masters in Teaching and Learning

Ms. Engle has taught at Monroe High School, one of the districts most affluent high school communities, for the past nine years. All of her teaching experience is in this school where she has taught English 9, 10, and 11 to multiple levels of students, from collaborative, to standard, to honors, and AP. Like many of these participants, she seems to be constantly pursuing advanced learning in the practice. She enrolled in a Masters program in Curriculum and Instruction after teaching for three years and then sought her National Board Certification the year after earning her Masters Degree. Her husband is a teacher as well, and Engle describes him as “a very engaging teacher too,” and they often talk about instructional practice at home. This year at Monroe she teachers 10th grade honors-level English and 10th grade collaborative English.

Observation. I observed Ms. Engle’s 10th grade Honors Level English class at the beginning of the school day. She began the lesson sequence with a review of vocabulary words assigned to the students earlier in the week. During this activity, her students were given small oval whiteboards with handles and dry-erase pens. The teacher then lead a whole-class discussion using a digital presentation featuring images for each word. The images showed a

great deal of creativity on her part; they featured references to literature, local sports teams, and even internet memes. With each image students were asked to apply the best vocabulary word to the scenario or picture. All 25 of the students answered each question on their whiteboards then held up the boards to show Ms. Engle. I noted many were competing with one another, laughing at the pictures, or trying to share their answers with the instructor and one another. While circulating the room, the teacher complimented responses, corrected words, or asked students for clarification. On my observation form, I noted high levels of engagement on all three subscales, because students seemed to be enjoying the references and competition, and there was clear evidence of participation through the whiteboard while they applied their knowledge to new scenarios.

Afterwards, the instructor led a discussion on the background for *Of Mice and Men*. She gave a brief history of the American Dust Bowl era by showing images from the 1930s. Interestingly, the students continued to try to use the new vocabulary words throughout the lesson even without any specific instruction. During the lecture, she asked students to write down their reactions to the pictures, predictions of the mood, or references to times they had traveled to the sites featured in the novel. Students asked questions, talked to one another, and seemed generally invested in the activity.

Overall I noted high levels of engagement on the second task as well as the first. Students showed high to moderate levels of affective and behavioral engagement by showing interest in the topic and the instructor. Cognitive engagement was more difficult to observe in the second activity, but their responses to her reaction questions showed evidence of student reflection and monitoring of their own progress.

Conceptualization of student engagement. When asked to define student engagement,

Ms. Engle responded,

I think student engagement has to have a couple things going on in the classroom. Students have to be interested in learning; they have to attentive as to what is going on. And I think to some people that might mean fun, like they are having fun in the classroom. But then I also think engagement is at another level where they actually want to learn the content. The want to know how this applies to their lives or how this is relevant to everything else they are learning within the school or within their classes.

These basic themes of her initial definition held consistent through the interview. They are:

1. student involvement and participation,
2. student interest,
3. students working with one another and connecting with the teacher
4. and students applying and connecting ideas.

She explained, “I want participation from the majority of the class, I’m also looking for them being focused and on task... not just zoning out” and repeatedly noted indicators like students paying attention, raising hands, and interacting with one another. She also believed students needed to show interest and enjoyment in an activity to be fully engaged during learning. In the lesson I observed, she knew students were engaged because they “seemed excited to review the words with the whiteboards.” Engle referenced the presence of social interaction as a component of engagement as well, explaining that students need to work with one another and feel connected with the teacher to be fully engaged. The last major component of her construction of student engagement centers on students’ abilities to make “connections.” Explaining that students are engaged when things “apply to their lives” she focuses on strategies that try “to activate any prior knowledge or connection” like when she asked students if they had ever been to California before providing background on Steinbeck’s novel.

Sources of engagement knowledge. Ms. Engle found her sources for engagement knowledge took a variety of forms. They were:

1. her experience,
2. her principal and his emphasis on bolstering engaged learning in the school based on survey data,
3. observations of engaging teachers and conversations with other professionals,
4. and Professional Learning Communities (PLCs) and the CAPS 21 initiative.

When discussing the source for this conceptualization, Engle first mentioned a faculty meeting held at the beginning of the year. The principal of Monroe High shared data from a student survey given the previous year. One of the questions asked students to report their level of engagement in classroom instruction at the school, and this item was marked as “one of the lower areas” on the survey. Engle stated the data itself, and the priority placed on increasing engagement in the school caused her to think about the construct more deeply.

She pointed to other sources of her knowledge, as well, explaining, “I think it’s just been something I’ve always thought about.” Observing other teachers, interacting with mentors, and collaborating with peers were also cited as major contributing factors to how she views student engagement in her own instruction. I could tell Engle has been highly involved in building and district level professional development. She explained that Monroe High requires teachers to form Professional Learning Communities (PLCs) where teachers collaborate and focus on co-created teaching goals each semester. These PLCs along with participation in the CAPS 21 lesson planning competition also helped her formulate an understanding of engaged learning. Finally, she explained that her experience in the profession helped her understand student engagement more fully.

I don't think I've had specific instruction on engagement or what it would look like or some specific formula to follow, so I think just experience. Well I do recall maybe in my first couple years teaching just throwing the term out there—"we need to engage our students more!" But as a new teacher, you're kind of wondering, could someone actually help me figure that out?

Ms. Frank

"Yes, I feel like I hear engagement within the last, let's say five years. It's really becoming forefront. But I feel like it's been a nagging voice in the back of my mind for a long time."

Table 4.6

Ms. Frank's Professional Context

Gender	School	School SES	Grade Levels	Subject Areas	Years of Experience	Years at Current School	Highest Degree
Female	Ford MS	Low-poverty	6 th & 8 th	Science	16	6	M.Ed. Teaching

Ms. Frank began college as a veterinary science major but switched to BA program in teaching during university studies. She entered a graduate program in teaching immediately after finishing her first degree and began working at CAPS when she finished her studies. She has taught mostly 8th grade at Ford Middle and another district middle school. She frequently attends conferences and noted in her interview that she loves working with the school's technology resource teacher and works hard to incorporate technology in the curriculum. She collaborates often with Mr. Dawson, who is also a participant in this study, and is one of the three teachers at Ford Middle to be included in this work.

Observation. I visited Ms. Frank's eighth grade, honors-level Earth Science class during the middle of the school day. When I came in, students were reading and analyzing an article on solar powered airplanes while the teacher reviewed research and reading strategies with both the whole class and small clusters of students. All twenty students were reading from their laptops while the teacher circulated the class, both questioning and redirecting students during the task. She then facilitated a class discussion on the article, asking students about both content and their

approach to the research. The final piece of the instructional set came in the form of small-group work, where students were assigned debate teams consisting of three members. These teams researched various forms of energy in preparation for a whole-class debate lesson requiring them to make a case for the most fundable and safe sources of energy for a society.

Conceptualization of student engagement. As I spoke with Ms. Frank, her conceptualization of engagement centered around four major themes. Engaged students:

1. are involved and invested in their learning,
2. work hard and participate,
3. discuss their ideas with peers and the teacher,
4. take the learning further and expand on their own knowledge,
5. and see the work as meaningful through real world connections.

When asked to define engagement she explained, “So when you look at your kids in the classroom—whether they are discussing something, working on something—they are involved in whatever you’ve given them. They are truly vested, having interest in it.” This was apparent in the activity I observed, as student interaction and interest development were a priority in the instructional set. She has her classroom set up for table-based group work and noted that she looks for student collaboration and conversations to indicate engagement as well. She also indicated the importance of students “really taking it further” and “kind of expanding on what we are doing” through research and questioning as a component of their overall engagement.

Finally, she is a teacher who believes in the importance of perceived meaningfulness of the learning as a part of engagement, citing “real world connections” several times in the interview:

I think it’s those real world connections. If you can take what you have given them and they can make a personal connection to it—I feel like they really get it. If they are making a personal connection, then they are probably interested, and that is the key with engagement in middle school.

Sources of engagement knowledge. Ms. Frank believes that her knowledge of engagement has “been evolving over time.” She explained that when she first started teaching “it wasn’t there,” but that she learned more about student engagement from:

1. experience,
2. researching strategies online,
3. Ford Middle School’s culture,
4. and talking with her principal and peers.

Like Mr. Dawson, Ms. Frank cited the building culture and observing principal at Ford Middle as a source for her understanding of engagement. During formal observations, the principal observes Ms. Frank and looks for indicators of student engagement. I asked her the nature of these indicators, and she explained that he talks to students during class and “he wants them to say not just ‘I have to do this.’ He wants to hear them say something cool they are learning, and he looks to see if they are on task.” She admits that her experience with administrator lead observations and the conferences after are a big contributing factor for how she views engagement. Co-planning discussions with colleagues and interactions with the school resource teacher were also mentioned as sources for her engagement knowledge in addition to her experience, research, and administrator observations.

Ms. Gray.

“No I’ve never heard a specific theory of engagement. I think it would have been a much shorter journey if I had. And I feel like engagement is something that should be teachable, instead of having to spend ten to fifteen years figuring it out. That’s a lot of kids who weren’t engaged.”

Table 4.7

Ms. Gray's Professional Context

Gender	School	School SES	Grade Levels	Subject Areas	Years of Experience	Years at Current School	Highest Degree
Female	Eisenhower MS & Washington HS	High-poverty	6 th -10 th	Reading/English	19	1	M.Ed in Reading Instruction (in progress)

Within the sample, Ms. Gray is the only instructor working in multiple schools. She is a reading specialist who works with both students and faculty in high-needs schools to support reading instruction across the curriculum. For eighteen years prior, she worked as an English teacher both within the CAPS district and a neighboring school system at the high school level. Currently most of her work focuses on helping the student population of Eisenhower Middle School, a high-needs, low SES school working towards state accreditation. Though she does not have a classroom of her own, Gray explains that she leads lessons daily and has 19 years of experience in the profession. I considered whether or not to keep her in the study when I learned she was not a traditional classroom teacher this year, but I ultimately believed that her experience in the low SES context would provide crucial insight in understanding student engagement in all contexts. Of all the teachers sampled, she is the only one working in a non-accredited school with the highest percentage of students on FRL. Eisenhower MS has 62% of students on FRL, which is the fourth most of any secondary school in CAPS, and Washington HS reports 68% of students on the FRL list—the second most of any middle or high school.

Observation. I coordinated a time to observe Ms. Gray in a 7th grade, standard level, reading class at the end of a school day on a Friday. She was teaching a lesson for a colleague in the building, which is common practice for a literacy coach. While she knew some of the students in the classroom, Gray did not have regular interaction with this group. In full

disclosure, I was worried for her; I knew this context would be challenging due to the time of observation and the fact that she had limited time to establish a relationship with students. During the lesson, she did in fact experience difficulty with keeping students engaged, according to my observation. She began with a teacher-led discussion of critical reading strategies, followed by small group readings of three articles with two or three students in each group. Many students were actively *avoiding* work, and even fewer appeared to have even moderate levels of engagement. It did not seem to appear to faze Ms. Gray, though, and she worked tirelessly to redirect off-task behaviors, question and discuss the readings with the students, and push them towards deep comprehension. When I left, I was, on one hand, glad that I saw this type of classroom; it mirrored that of many high-needs classes around the country in low-income or underserved areas. On the other hand, I was concerned that I would be talking to a teacher who showed strong evidence of instructional skill but still had to fight hard to keep students engaged.

Interestingly enough, during the interview, Grey was open and honest about the lack of engagement and identified specific students as disengaged from memory. To my surprise, her assessment matched mine exactly. She explained that it was a tough day. Some students “were mad when [she] walked in the door for whatever reason” and made no excuses but admitted “because it wasn’t [her] class, [she] didn’t have the rapport... to get them engaged.” I make special note of this observation for two reasons. One, it suggests that even strong teachers have difficulty engaging students despite their professional knowledge. Gray spoke at length about engagement with the longest interview of all subjects—over 43 minutes--and had a very definite view of student engagement and repeatedly mentioned its importance to her instructional approach. Two, it allowed me to confirm that, at least in this case, the teacher’s assessment of

low engagement matched my own. In all the observations leading up to this, I saw classes with relatively high levels of engagement. Seeing a class with low levels of engagement and having that observation confirmed by the teacher may help lend validity to the idea that student engagement is a construct that can be observed and measured with consistency between educators.

Conceptualization of student engagement. Gray's conceptualization of engagement contained a great level of detail, but when summarized it followed four themes of student:

1. interest,
2. on task and attentive behavior,
3. critical or deep thinking,
4. work to help others,
5. and her connection with students.

As a reading teacher, she stressed the need for students to find texts interesting to promote engagement, saying, "Boring texts aren't engaging! Nobody likes to read boring text- *we* don't like to read boring texts and we are adults!" Gray remarked several times that she puts a lot of thought into interesting and relevant reading choices to help the students engage. She also pays close attention to attentive behavior, which was a noted struggle during the observed lesson.

Using body language, responsiveness, and evidence of on-task work, Gray measures engagement partially through these behavioral indicators. She also emphasized the role of critical and strategic thinking, in writing assignments especially, as conditions that promote high levels of engagement in her students:

If I have to talk about the ideas first, what I'm thinking about or what you think about, and *then* I have to write- *now* I'm engaged, because it means something and talked with somebody else and I've thought through it.

She also mentioned several times that engaged students are not just “compliant.” I probed her more on this topic because a discussion of compliant vs. engaged is a major part of the Schlechty Model of Engagement (Schlechty, 2011). She said that during the lesson “[she] had a couple of kids in the back who were compliant but not engaged” and referenced the difference between compliance and engagement two other times during the interview. Her quote about writing engagement encapsulated her views on this piece of engagement well:

If I think about writing- compliant writing is “I’ve filled in my five paragraph essay and I’m quietly filling in all the sentences I need in order to make you go away and give me a B.” Engaged writing is messy. Their papers will have arrows. There are kids trying to figure out how to say something well. There’s kids asking questions or asking a neighbor “Hey I don’t know what...what is the word I want?”

It is worth mentioning that Gray admits to being an avid consumer of practitioner-focused books, especially in reading theories, but said she has never been exposed to a theory of engagement or the Schlechty model specifically.

Sources of engagement knowledge. Ms. Gray’s conceptualization of student engagement was both very rich and very lengthy—it admittedly took her a great deal of work and examples to communicate how she viewed engagement. It seemed much easier for her to identify her sources of engagement knowledge. The major sources were her:

1. experience in the profession,
2. independent research,
3. and collegiate learning about engagement that was ultimately less valuable than her experience and reflection.

She believed that her current understanding of engagement followed this trajectory:

I can say it’s been a journey. So I graduated and got my first job... and I wasn’t getting a lot out of [the students] in terms of real thinking and learning, and then slowly I tried to find ways to get kids thinking and interesting. And then honestly, between my own belief

that I need to work on that, that I didn't want kids that were just drones, and reading widely in the field, that's is probably what did it.

While she notes that in “grad school we talk about engagement a lot... but it doesn't seem to translate very well into the classroom.” She then continued to explain that though her classes discuss engagement, she has never learned one set theory but wishes that she had.

Mr. Hart

“I guess a highly engaged classroom therefore requires the need for the teacher to be highly aware. I have to be engaged too, and I have to care... I have to keep it interesting and I have to keep it coming.”

Table 4.8

Ms. Hart's Professional Context

Gender	School	School SES	Grade Levels	Subject Areas	Years of Experience	Years at Current School	Highest Degree
Male	Taft HS	High-poverty	11	Math	9	9	MBA

Mr. Hart is a career switcher, trained as a mechanical engineer and with over 25 years of experience “in the corporate world.” At 50, he retired from his job training and overseeing over 6,000 employees and became a math teacher through a program targeted towards career switchers. He was hired by the CAPS district and has taught Algebra II, AP Statistics, IB Statistics, and an original math course he designed to meet the needs of students in Taft's IB program. Hart has taught both magnet students who apply to the IB program hosted at Taft High as well as students zoned for Taft. The school is in the East End of the district and has 53% of students on free and reduced lunch. He notes a large difference in ability in the students he teaches, some there for IB curricula and others participating in the district's standard graduation track. It was clear during the interview that he held an influential leadership position in his previous job but has a great deal of passion for his current position as a math educator.

Observation. I visited Hart’s IB Statistics class in the beginning of the day. I know from my experience that the IB program at Taft is well-regarded in the community and draws from students all over the district with a large percentage of students coming from East End Middle School programs. At the beginning of the class, students were working on a multi-step, scenario based statistic problem using data collected from a hypothetical wine distributor. The students had to run statistical analyses of sales numbers and then were instructed to make recommendations for the company. During the independent work, students were allowed to talk to one another, and Hart circled the room interacting with them, sometimes talking about the problem, sometimes questioning their methods, and other times talking to them about their day. The class was the smallest I observed with only 10 students. Throughout the independent work, Hart played classical music, which he later explained was a regular occurrence mostly because he grew up loving music while also creating a favorable ambiance in the classroom.

After the independent work, he led a whole class discussion reviewing the activity. He continued to reference the need for students to make their answers sound “less statistics-ly” and more understandable to a general audience. There was a great deal of peer-to-peer talk as well as laughter from the students, who appeared to enjoy Hart’s style of teacher-led discussion.

Conceptualization of student engagement. Hart’s explanation of engagement followed five major trends. He believed to be engaged students must:

1. be interested and enthusiastic,
2. be attentive and comfortable participating with the lesson,
3. be thinking deeply about the content and steps in the processes,
4. converse with one another and the teacher when comfortable,
5. feel a sense of trust or respect in the classroom, especially with the teacher,

6. and see the work as relevant and applicable to their lives.

In reference to the interest and enthusiasm present in engaged learners, Hart described a highly engaged classroom where “there is a hum, and there is an excitement in that hum.” For him, highly engaged learning consists of a great deal of interested and enthusiastic conversation between everyone in the room. For me, this belief was overt in his instruction—his approach in the lesson was very reliant on effective and constant communication, questioning, and discussion. In a research memo summarizing the observation, I wrote this excited “hum” was so contagious I had to work hard to keep taking observation data without getting too absorbed in the discussion to remember to take notes. He also referenced the importance of on-task behavior and participation but usually as an afterthought. In reviewing his interview and observation, he shows signs he has little trouble keeping students on task, even with individuals who are disruptive for other teachers, but he notes the importance of attentiveness in his lesson reflection as well. When he explained the presence of deep and critical thinking in his construction, Hart said,

That’s the definition of engagement: I’m trying to force them to think about the steps in the process, and how they are going to communicate it to whoever the audience is. If I’ve done that... I think I’ve increased their level of engagement

He works to make the students actively aware of their learning instead of many students who prefer “a mechanical way of approaching the problem... to check a box and get 100.”

Hart also stresses the importance of rapport and relevance/applicability of knowledge. He believed that for his standard level Algebra classes, the environment of trust and respect between himself and the students is key to their engagement. He explained that many of his students at Taft come from what he sees as a difficult home lives and “you’ve got to establish an environment where they know you respect them” and “if [he] treat[s] them with trust and establish that from the first day, then they will say, ‘I can trust this individual to not get mad, not

call me out.”” Once this understanding is achieved, according to Hart, his students will be more engaged in the learning. Finally, Hart continuously focused on the need for social interactions in engaged learning. These interactions, whether they are in the form of teacher student discussions, or peer-to-peer conversations, are a cornerstone of his teaching. This, again, was seen throughout my observation as well. In a highly engaged class, he believed it would be shown through students talking to one another: “I would much rather it be where there is a dynamic conversation moving around the room. To me that’s a highly engaged class.”

Sources of engagement knowledge. Though he offered a great deal of information on his construction of engagement, Hart is the only one of the ten teachers to report that he does not specifically plan for student engagement when he designs lessons in his lesson reflection survey. Instead, he reported that “[he] tend[s] to assume engagement and feel the responsibility for it” during discussion. This led me to believe Hart’s process of engaging students is more an in-the-moment approach rather than one of forethought. In spite of this, it was evident after observing and talking with him that Mr. Hart’s instructional style was a highly engaging one. When discussing the sources, Hart explains that he thinks about engagement but usually does not call it “student engagement” when speaking with colleagues.

His sources of this knowledge come from:

1. his experience in the corporate world and teaching,
2. talking with and observing colleagues,
3. and a heightened awareness of students through the NBCT process.

While many of the participants referenced teaching experience as a source, Hart is the only one who cited outside experience as the place he developed knowledge of engagement:

My corporate work was often with very large numbers of people. The last job I had I was responsible for 6,000 people around the world. How do you engage 6,000 people?...My sensitivity to [engagement] was developed in the corporate world.

Afterwards, he explained, his nine years of teaching experience helped his understanding of engagement “evolve.” Another cited source was his interactions with nearby colleagues. He often speaks with teachers about ways to make students interested or involved in lessons, and loves to observe a physics teacher whose lessons are active and show high levels of engagement in Hart’s eyes. Finally he mentioned that the NBCT process heightened his awareness of student engagement as he wrote lesson reflections.

Ms. Ian

“I think we hear a lot about student engagement, but I don’t know that we really talk about it enough. I know that’s what every teacher wants, but is it something we really talk about?”

Table 4.9

Ms. Ian’s Professional Context

Gender	School	School SES	Grade Levels	Subject Areas	Years of Experience	Years at Current School	Highest Degree
Female	Ford MS	Low-poverty	6	Reading	24	7	BA in English

Ms. Ian is an English and Reading teacher with 24 years of experience in the profession. She began teaching high school in a district adjacent to CAPS immediately after graduating college, then took a few years off to raise a family. When she returned to the profession she taught at an independent middle school, and then transferred to the CAPS district where she taught at Jackson Middle before moving to the newly opened Ford Middle seven years ago. She became a reading teacher three years ago at Ford, a high achieving, high SES middle school that hosts two other participants in this study, Ms. Frank and Mr. Dawson.

Observation. I came to Ms. Ian's class in the late morning in the middle of an article analysis lesson. Her student population is the youngest in the study as the only 6th grade class observed. I immediately made note of her classroom layout in my observation; she had comfortable seats, couches, and student artwork lining the walls, with collaborative tables in the middle of the room where students were reading articles. She handed me the article the students were reading, and I was somewhat surprised to see that they were studying a piece of investigative journalism examining how much urine was in the average public pool. The sixth graders were noticeably enjoying the article, smiling, laughing, and exclaiming, "Ewww!" After about ten minutes, Ms. Ian lead the class in an analysis of the reading, asking probing questions like how the students could have predicted the article's content through its title. She reviewed the content and asked students to stand up if they still wanted to go to the pool. She then referenced a previously assigned article after the discussion of the first and used videos to elaborate on that reading. During the entire lesson, students were actively asking questions, and Ms. Ian frequently had to work to keep the students calm in their excitement. I noticed that she repeatedly asked the students to reference their own lives and experience in relation to the reading and was encouraging their reactions to the humorous topics by asking questions like "Were you shocked when you read this?" and "Is this the grossest thing you've read?" She confirmed that these decisions were by choice, even though they made her a little uncomfortable, because she knew it would engage her readers through their reactions and interest. Her close relationship with her students was absolutely apparent. Even during our interview, which was held before school in her classroom, she had students coming in to talk about their day and ask her for advice.

Construction of student engagement. Ms. Ian's expressed answers to the interview regarding student engagement closely followed many of the themes I observed in her classroom teaching. Her construction of engagement incorporated:

1. student interest and excitement,
2. student participation and on task behavior,
3. student conversations with one another,
4. students connecting ideas to their lives and previous knowledge,
5. and the feeling of a trusting, comfortable, and caring student-teacher relationship.

From her response to the very first question about her views on engagement, Ian believed that the construct is "student loving what they are doing." She went on to explain when she was teaching high school she had a hard time engaging students because of the content: "The kids hated it. And that was tough- teaching things they didn't love, because it was hard to engage them." She later touched on this same theme again when analyzing the observed lesson, noting that she got nervous because the article used the word "pee," but she "knew they would go crazy" and agreed with my own assessment that this caused high levels of engagement with the class. The next theme in her response kept emerging when I asked her for indicators of engagement. Each time she noted behaviors like eye contact, body language, participation, and question asking. Another consistent element of her discussion was the importance of relevance and connections in student engagement. I asked her if these types of connection mattered to engagement, and she responded, "Absolutely... it's all about connections, connecting what they are doing in the classroom with the real world. Connecting the literature to themselves. Connecting it to what they are doing in other classrooms."

Finally, Ms. Ian's teaching approach, which she admitted is driven largely by a desire to engage her students daily, is heavily reliant on her relationship to the students. She did not mention much about peer-to-peer interactions, instead focusing mostly on her relationship with the students. I asked her if this relationship played in to her construction of engagement. She responded,

For me it is...I want to know what is going on in the other classes, what is going on in their world, so I think this is a big part of engagement. At least for me it is, the kids know that I care about what they are doing and how they feel and that makes them more engaged.

She referenced this type of relationship repeatedly, also citing a feeling of trust and community essential in fostering engaged learning in her classroom.

Sources of engagement knowledge. The sources of Ms. Ian's engagement knowledge followed three trends:

1. her experience in teaching and trying to have more engaging lessons,
2. observing and talking with colleagues,
3. independent reading on instructional strategies
4. and the school culture at Ford Middle School.

In regards to her experience, she noted that she began to think about engagement at the onset of her career during student teaching. She had lessons that failed, and "it was because the students weren't engaged." She elaborated,

It was a feeling you know? Because if you're upthere and you feel yourself just *die!* You know what I mean? Like a comic that is on stage and no one is laughing at your jokes? That's what it feels when you're up there and your kids aren't engaged. Oh it's the worst!

After experiences with unengaged classes, she reflected and eventually became a more engaging instructor. She also remarked that she loves watching other people teach, and her favorite staff development lessons occur when she can observe colleagues and look for engagement. Finally,

like the other Ford Middle School teachers, she cites the building’s unique culture as her final source for engagement, though she has only been at Ford for seven of her twenty-four years:

I think we are all about it here... and that’s different than any place I’ve ever been. I’ve never known teachers who know so much about kids, and I love that. So yeah I do think we are all on the same level with student engagement.

While her answer was consistent with other Ford teachers who cited the building culture, I made note in a post-interview reflection that she did not mention the building’s principal or post-observation conferences as a major source of engagement knowledge like Mr. Dawson and Ms. Frank.

Ms. Jackson

“Because that’s the main point of education- how to keep them engaged.”

Table 4.10

Ms. Jackson’s Professional Context

Gender	School	School SES	Grade Levels	Subject Areas	Years of Experience	Years at Current School	Highest Degree
Female	Wilson HS	Mid-poverty	9-12	Science/Exceptional Education	29	11	Masters in Science Education

Ms. Jackson, a teacher at Wilson High, boasts twenty-nine years in the profession. She began teaching in her native country of Romania where she was a physics teacher for eighteen years where she also earned a Master’s Degree in atomic and nuclear physics. When she moved to the CAPS district, she earned her license in exceptional education. She has taught many different classes at Wilson High including self-contained science classes, collaborative classes, general education classes, and most recently IB and AP Physics. This year she teaches general education classes in earth science and physics, as well as IB and AP Physics. Wilson High school is on the West End of the district, with a student population with 42% of students on FRL. In

addition, Wilson High has been seeing an increase in its ESL population with new Latino, Eastern European and Asian communities moving into its zone.

Observation. I observed Ms. Jackson's Earth Science class at the end of a school day during the middle of the week. She began the lesson with a warm-up worksheet that required students to answer questions about soil erosion and displacement in the American Dust Bowl. The class was small for a CAPS classroom, with only fourteen students. After the worksheet was complete, Ms. Jackson asked them to switch papers and give feedback to their peers. She then reviewed the work in a teacher-led discussion, where I noted that she experienced difficulty keeping five of the students on task and participating. Periodically she would peak the class's interest with interesting facts about the Dust Bowl; she explained that when cattle died during this time, they were cut open to reveal bellies full of sand. The class generally reacted to her comments, but seemed sluggish. After this, she had students use their laptops to work in groups and complete a follow-up assignment through an online learning management system.

Of the observations, this was the only one to be marked with moderate levels of engagement by my account. Again, as with Ms. Gray's assessment of her low engaged class, Jackson expressed, without prompt, that she did not think her class was very engaged, especially during the teacher-driven portion of the lesson. This aligned very closely with my own notes. What I did not know until the interview was that all twelve students were identified as ESL, with five students characterized as very low in English speaking ability at this time. She explained that she has struggled all year to keep them engaged due to the language barrier, and used the peer activities to pair strong speakers with weaker ones to help translate ideas and help one another.

Conceptualization of student engagement. Ms. Jackson's view of engagement followed four themes. For her students are engaged when they:

1. are interested,
2. complete work,
3. ask and answer questions,
4. and apply and use evidence while learning.

When referencing the role of interest in student engagement, Jackson primarily drew examples from the observed lesson. She knew students became more engaged at one particular point where she showed a jar of sediment and water from a previous lab. Over the weekend, some of the water had evaporated while the sediment level remained the same. She explained, "they loved the examples; they were interested. One of the kids said 'But the water is lower now!' And they were very surprised by the fact, and they saw their missed connection." I asked if she thought this interest was a part of their overall engagement, and she replied, "yes, because they didn't expect it to evaporate at room temperature, so they were interested and more engaged after."

Much of her discussion on engagement centered on behavioral factors. Paying attention, completing work, and participating in class were all key indicators referenced repeatedly. Interestingly, later in the interview Jackson revealed last year she and a colleague participated in formal observations of one another as a part of a staff development project. Her partner asked Jackson to help assess the engagement in her classroom. Ms. Jackson developed an observational tool based on these type of behavioral factors, but she felt that it wasn't a complete view of the construct "because the evidence I took was all on student behavior." This helped confirm that while Jackson saw behavioral factors as important, they are only part of her overall definition of the term. Finally, Jackson referenced the need for application of knowledge in engaged thinking.

She explained that her students became more engaged “when they had to apply the knowledge” during her lesson, and that the application of knowledge in learning fostered higher levels of engagement in the students.

Sources of engagement knowledge. Jackson believed that her understanding of engagement stems from three sources:

1. her experience as a teacher,
2. observing colleagues,
3. and the NBCT process.

For her, her ability to engage students originates from an instinct she has developed during her years in the profession. “I think that instinct, the feeling that what you do right now in the classroom engages them, I built that over time.” This experience, she stated, allows her to alter lesson plans and adjust in the middle of instruction to better engage learners. She also stated that she is frequent observer of colleagues. As mentioned above, Jackson even observed a peer with the express purpose of helping the teacher identify the engagement in her classroom through observation tools—though the tools were seen as incomplete because they took only behavioral factors into consideration. This was not only impressive; it supports the idea that teachers are searching for ways to help one another measure engagement. Her experience also suggests that multi-dimensional models and observation tools may be more beneficial than data only focused on behavioral indicators of engagement. Finally, she explained that the National Board Standards used in the NBCT process helped her understand engagement more deeply and think more about student learning, though she explained that she was never given a specific model of engagement to follow during the NBCT process.

Themes Across Cases

Research Question One: How NBCTs Conceptualize Student Engagement

According to Patton (1990) the task of analyzing qualitative data requires “critical and creative thinking” (p. 434) including. After the deep examination of my experience with each teacher as a single unit, I needed to find creative ways to extract common themes among the participants. In my narrative analysis of teachers’ conceptualizations of engagement, I strove to remain faithful to the teachers’ own words and phrasing. I wanted to avoid linking them too closely with wording or terminology from the existent theories of engagement in the literature or even with phrasing and ideas provided by another participant. To see how the ten conceptualizations of these master teachers overlap and contrast with one another, I used the codebook to extract thematic commonalities in their answers. From this analysis, seven themes emerged.

1. Interest and Positive Emotions
2. Engaged Behaviors
3. Social Interaction
4. Application/ Relevance/Real World Connections
5. Deep and Strategic Thinking
6. Student-Teacher Rapport
7. Control Over Learning Environment

I then created a matrix of each participant’s answer juxtaposed to the seven themes to see which elements are present in the ten theories of engagement provided by the teachers. If a teacher provided answers assigned to codes within a given category, I made note by checking off the corresponding cell at the intersection of the teacher and the category. The full matrix is shown on the next page (Figure 4.1).

Name	Grade	Subject	1- Interest	2- Behaviors	3- Social Interaction	4- Application/ Relevance/ Real World Connections	5- Deep Thinking/ Understanding	6- Student- Teacher Rapport	7- Control Over Learning Environment
Anderson	8th	Math	✓	✓	✓		✓	✓	
Brown	9th-12th	Business	✓	✓					
Cook	9th	English	✓	✓	✓	✓			✓
Dawson	7th & 8th	Science	✓	✓	✓	✓	✓		
Engle	10th	English	✓	✓	✓	✓		✓	
Frank	7th & 8th	Science	✓	✓	✓	✓	✓		
Gray	6th - 12th	Reading	✓	✓	✓		✓	✓	
Hart	11th	Math	✓	✓	✓	✓	✓	✓	
Ian	6th	Reading	✓	✓	✓	✓		✓	
Jackson	9th-12th	Science	✓	✓	✓	✓	✓		

Figure 4.1 Matrix Display for Research Question One Themes

These themes are ranked in order of the number of teachers providing responses corresponding to each category. I did not use individual code frequencies to inform this hierarchy, because teachers often repeated themselves or made mention of a specific aspect of engagement multiple times throughout their reflection or interview. However, if I *had* used categorical code frequencies to rank these themes in order from most mentions to least, the order would have remained the same. In other words, *Interest and Positive Emotions* and *Engaged Behaviors* contained the highest total of applied codes, and *Control Over Learning Environment* contained the fewest with the remaining categories falling in order between these themes.

In this section, I will first elaborate on each theme, and then will look at which elements are present in each teacher's definition of student engagement.

Theme one: interest and positive emotions. All ten teachers referenced the importance of interest, enthusiasm and/or enjoyment during engaged learning. This first theme focuses on positive affective feelings and emotions experienced by learners who are highly engaged.

Of all the codes related to the first research question, *Interest in Topic/Class* was the most frequently assigned. Ms. Cook explained that “highly engaged comes down to enthusiasm and then understanding the topic and being interested.” Ms. Engle began her explanation of engagement saying “First, students have to be interested in the learning.” Ms. Ian admitted that when she was required to teach boring texts “that was tough- teaching things that they didn't love, because it was hard to engage them.” Within this theme, the topic of interest is universal to all ten teacher. Each one references this element of Theme One at least once in their constructions of engagement, and some harped on the importance of interest four or five times during their discussion (Dawson, Engle, Gray, and Ian).

Enjoyment and enthusiasm during learning also fall into this category. Like interest, they are seen throughout the teacher responses. When explaining the humorous video on workplace environments, Ms. Brown recognized that her students were more engaged because they “liked how it showed the bad things.” Engle noted that part of engaged learning happens when students “are having fun in the classroom”.

When I asked teachers to describe a highly engaged classroom, some explained that engaged learning could be heard. They described highly engaged classes as noisy and excited. For example, Mr. Hart stated that in a highly engaged environment “there is a hum, and an excitement to that hum.” When I spoke with Ms. Gray, she agreed “an engaged classroom is probably going to be a bit noisier... because kids are going to be interested in what we are learning.” In all, five of the ten teachers made explicit reference to this type of noise, buzz, or hum in an engaged classroom that they attributed to an indicator of high interest, enjoyment, or excitement in the students.

Theme two: engaged behaviors. While each teacher’s theory incorporated student interest and positive emotions in engaged learning, they also universally mentioned engaged behavior as a critical piece of engagement. This theme includes on task behavior, student completion of work, participation in the lesson, eye contact, body language, and other mostly concrete indicators of student participation and involvement.

The second most common code applied to all explanation of engaged behavior is included under this category— *on-task/doing work*. As with the code for *interest in topic/class*, all ten participants had at least one quote assigned to this code. Ms. Cook answered that an easy initial indicator of engagement was “as simple as students being on task... or working on the assignment like they are supposed to.” Every teacher in the study had a relatively similar

inclusion to their definition in terms of on task behavior. This code often emerged early in their description of engaged learning, but some teacher repeated its importance throughout their interview. Ms. Brown, who placed a great deal of emphasis on concrete behavioral indicators, referenced on-task behavior six of the total twenty-five recorded times the code was used.

All of the teachers also directly referenced either *participation* or *paying attention/listening* as a factor in student engagement, in addition to their inclusion of *on-task/doing work*. Ms. Engle explained, “I look for a variety of participating... I want participation from the majority of the class. I’m also looking for being focused and being on task.” Jackson agreed that to identify engaged learning she “can observe how they work, but [she] look[s] for participation to see if they are engaged.” Responses coded with these parts of the theme vary little but remain constant across cases.

Another consistent element within this theme and the teachers’ overall theories is the importance of *body language* and *eye contact*. I struggled whether this code should be incorporated into an overall theme; I wondered if eye contact is more an indicator of engagement, rather than a part of engaged learning. However, the code for *eye contact* exists in the Wang et al. (2016) codebook, and reference to the two elements were so common that I felt these should be included in the category based on the expressed beliefs of the participants. *Body Language* was not a part of the Wang et al. codebook, but it was added as an in vivo code and placed in this category due to its close relationship with eye contact and the fact that it was generally mentioned as teachers talked about behavioral indicators of engagement. Ms. Anderson said, “I can tell from their facial expressions whether or not they are engaged. I see if they are making eye contact with me.” When explaining how she assesses engaged learning in her reading class, Ms. Hart explained, “I’m looking for eye contact. I’m looking for body language”

before she elaborated and moved toward other socially oriented indicators. Ms. Ian followed an identical progressing saying her indicators were “eye contact, body language...” before also moving to explain other non-behavioral factors.

Theme three: social interactions. The first two themes of *Interest and Positive Emotion* and *Engaged Behavior* were common among all participants. For the third theme, *Social Interaction* every teacher but one, Ms. Brown identified elements of social interaction as present in engaged learning. This type of social interaction relates specifically to how peers interact with one another, as student-teacher interactions emerged uniquely as their own theme.

In my initial codebook, codes for various types of social interaction fall under parent categories of *affective*, *behavioral*, and *cognitive* scales. For example, *teaching peers* is a part of the cognitive scale, while *working with peers* falls under behavioral engagement. Based on my analysis of the theories of this study’s participants, social interaction warrants its own category. One reason for this was the overall number of teachers who included social elements in their constructions—all but Ms. Brown. Another reason was the adamancy many teachers placed on social interactions as a part of engaged learning during their interviews; Mr. Hart, for example, saw these processes as the most important part of engagement. In addition, I never intended to adopt the initial codebook’s categories during analysis. While I wanted to use previous work to help provide individual data codes, I wanted thematic analysis to remain grounded in the data. Finally, I looked at the overall frequency of social codes when merged in a category. Overall, codes related to peer interactions made up a large portion of the overall applied codes during analysis. For these reasons, I grouped all forms of peer interactions into a parent category as opposed to the initial codebook’s organization that embedded them within *affective*, *behavioral*, and *cognitive* scales.

The most responses within this theme were coded as *interacting/working with peers*. However, this category contains multiple codes including *speaking out/discussing ideas*, *interacting with peers*, *interacting with teacher*, *raising hand/answering questions*, and *teaching self and peers*. Many of the responses falling into this theme required overlapping codes, so I will try to elaborate on the theme through longer more explanative quotes as opposed to a systematic review of each code.

Ms. Cook, with her belief in expert-peer grouping and peer-teaching, explains how social interaction relates to engagement:

A highly engaged classroom.. I think that can be shown a lot in discussion. A really engaged classroom- multiple students are raising their hands and giving input. They bounce ideas off one another. They say ‘I agree with what john said and here is why...’ They are talking to me and they are listening to their peers.

Not only does her response show evidence of *interacting/working with peers*, it also incorporates *asking questions*, and *speaking out/discussing ideas*. Mr. Dawson explained that when he’s looking for highly engaged learners, “[he] want[s] to see them interacting with their peers. [He] want[s] to see them interacting with [him].” Mr. Hart, like Ms. Cook, revolves much of his understanding of engagement and his teaching style around the social flow of the classroom. He explained to me that his fifth-block math class was even more engaged than the class I observed, because:

They will have more of that cross-class conversation. Not just conversation in the table. It happens across the classroom. They are asking each other questions, and they are responding.

He placed so much importance on *peer interaction*, *asking questions*, and *speaking out/discussing ideas*, that in his initial definition of engagement, he immediately equated learning to “the conversation.” I asked him to define the term and he said:

Student engagement: tracking along the conversation. Able to engage in the conversation as they are comfortable, and able to respond eventually to my questions.

Hoping for more answers, I asked him to elaborate and he again, after referencing eye contact and body language, returned to the importance of conversation.

I'm looking for on track conversation, so I don't try and prevent the conversations at the tables with students at them.... and I encourage those off-line conversations. As long as they are talking about math, there is no monopoly of math knowledge in the room.

For Mr. Hart, social interaction is so important that he allows it to take precedence over even *on task behavior* to promote engagement. This type of response made a powerful case for including social interaction as its own theme in the analysis.

The one element of this theme that would emerge independent from the other social codes was *teaching others*. When Ms. Gray talks about engaged writing, she described students "asking questions or asking a neighbor 'Hey I don't know what word I want. What is the word I want?'" Ms. Jackson agreed that when students "talk about what they do and explain what they did and what they saw to others, they get more engaged." Five of the ten teachers (Cook, Dawson, Frank, Hart, and Jackson) reported using ability or expert-peer grouping in their instruction to support engagement through peer teaching.

Theme four: application, relevance, and real world connections. I was not surprised to hear the term *real world connection* appear throughout the interviews and in the lesson reflections. As a practitioner, I hear this phrase often, and four teachers used the exact phrase as a part of engagement (Cook, Dawson, Frank, & Ian). While the initial codebook did not include *real world connections*, it was added early in the first round of coding. This code and those of *relevant to life*, and *apply/connecting ideas* were three of the main codes comprising this category and seen often in the data. They stuck closely together in responses, and the quotes

associated with them share so much commonality that *real world connections* a distinguishable and unique theme for the teachers' engagement theories.

Ms. Cook explained that "connection- all of them together make student engagement- but the highlights of my day are when students can make a connection to an outside source." Mr. Dawson defined engagement as "a connection to the real world... it has something that they are able to connect to their other classes and that they may see value in it." Engle noted:

"I think engagement is at another level where they actually want to learn the content. They want to know how this applies to their lives, or how this is relevant to everything else they are learning within the school or within their classes.

When I asked Mr. Hart to explain why he worked so hard to explain the link between statistics and future careers he said:

I pretty much used statistics every day for 25 years, so I'm trying to bring that world into the classroom as a means to engage them. This is an example that is real to you right? This isn't an academic thing- this isn't x plus y equals. This is people with real problems, so I'm continuously trying to emphasize that the problems we use- this isn't nonsense.

In total, seven of the teachers see overall student engagement as including the learner's understanding and awareness that knowledge is connected to other knowledge, their experiences, or life outside the classroom. In my observations, I saw many of teachers encourage and facilitate these connections constantly, whether through planning or through instructional instinct.

Theme five: deep and strategic thinking. While I observed the classrooms, I saw every teacher push students towards deeper understanding and awareness of their own learning. For six of the teachers, elements of *deep and strategic thinking* were included in their conceptualization of engagement. This category contains a greater number of descriptive codes than the other categories, but there is less reliance on one or two regularly applied codes to the teachers' responses. This theme of *deep and strategic thinking* incorporates students: (1) *trying to*

understand/process ideas, (2) trying to understand mistakes, (3) using strategies to learn/understand, (4) thinking hard/critical thinking, (5) taking apart and integrating ideas, (6) coming up with new strategies on their own and (7) using outside resources to understand. Other codes were aligned with this category but seen in only one or two instances.

It is more difficult to provide clean quotes as evidence of this category. Fredricks, Blumenfeld, and Paris (2004) explained at the onset of the tripartite model that cognitive factors related to engagement are often either overlooked or difficult to see or measure. Dr. Anderson, explained to me why she kept telling students to “answer with conviction” during her lesson as a way to engage them more:

Well you know the old story, you don't really know something unless you can teach someone else what it is? So when I say answer with conviction or confidence, I'm stretching them, I'm making them stretch so they don't just have the answer, they can tell me HOW they got it... that's different than just giving the answer.

In her lesson, she constantly questioned students on their mathematical and thought processes when problem solving, and this practice ended up being a part of her expressed theory of engagement—that students are engaged when they can break down their thinking, explain it, and critique it.

Ms. Frank reviewed how she teaches critical reading strategies in science, and said, “to me it's common sense how to read something”, but for her students she has to help them “pick apart articles, and look at the caption, look at the title, look at the pictures, so they can be engaged.” This type of process oriented instruction, to Frank, not only helped with comprehension, it also contributed to their overall engagement during the lesson. Ms. Gray believed that “engaged writing is messy. Their papers will have arrows. There are kids trying to figure out how to say something well.” Her statement is another practice-embedded answer that

shows how some of the teachers incorporate critical and strategic thinking into their conceptualizations.

Theme six: student-teacher rapport. Half of the teachers referenced student-teacher rapport as a part of student engagement (Anderson, Engle, Gray, Hart, and Ian). In fairness to the participants, I saw strong student-teacher relationships demonstrated in each of the classrooms, but the five who gave responses within this theme included this rapport as a piece of their own model for engaged learning. Within this theme, I relied almost wholly on inductive, in vivo, codes, as opposed to the first two themes that were largely comprised of inductive codes from the initial codebook.

The theme of *student-teacher rapport* includes a few separate elements: *trusts in the teacher*, *feels respected by the teacher*, and *student likes the teacher*. Many teachers also reference a feeling of overall *connection with the teacher*, but this was usually explained further through a more specific description of that connection. Ms. Ian was one of the most rapport-centric teachers I have ever seen. She told me that “relationships are a big part of student engagement”. I asked to her to elaborate and she said:

I think the kids have to trust you. They have to know you are genuine and that you are there for them and that you love what you do. It’s almost contagious. If you love what you are doing and they trust you, then they will be engaged. It’s one of the most important parts. If you don’t have a relationship with the kids, they shut down.

I may have wondered if her emphasis on rapport was due to the fact that she teaches younger students—sixth graders in reading, but Mr. Hart, who works with eleventh and twelfth graders gave a similar reasoning. “That’s a form of engagement for my college prep students. You’ve got to establish an environment where they know that you respect them.” In this quote he referenced students who often come from difficult and challenging home lives, and he believed that establishing trust and respect were key to keeping them engaged. The other three teachers

offered similar examples. Ms. Gray, whose lesson saw some of the lowest levels of engagement with certain students, explained that she could have engaged them “if they had been [her] kids”, but the fact that she was guest teaching the class meant there was no established relationship.

Theme seven: control over learning environment. The last theme, *student control over learning environment* applies only to Ms. Cook’s answers, but it is necessary to include for three reasons. One, she mentioned control definitively and frequently throughout her answers. I also wanted to avoid an exclusion of any negative or outlying case, especially because the study is taking into account the theories of ten teachers as opposed to a large-scale sample. If this protocol were repeated, other selected teacher may agree with this element of Cook’s theory. Finally, this part of her response closely aligned with the idea of *agentic engagement*, and I wanted to include it in a final comparison of these teachers’ constructions to existent theory.

Cook stated with affirmation, “Student engagement is when students are in control of their own learning and actively pursuing their own answers.” She later explained that she uses this feeling of control as evidence of engagement during learning:

I do more small group lessons after a whole group lesson than anything else, because the kids feel in control, and that they have responsibility, and their conversations are so much better than when we have them in class.

It cannot be determined whether or not the other teachers would agree with this statement or not, but no one else expressed referenced *feeling of control over the learning environment* as a part of student engagement. However, for Ms. Cook, it matters a great deal to how she understands overall student engagement.

Meta-Themes for how teachers conceptualize student engagement. As I spent time with data related to the first research question, what I will call meta-themes also emerged. These themes are not directly related to individual pieces of the teachers’ constructions, rather they help

situate all of the conceptualizations in overall, non-categorical trends. These highlight some of the deepest analysis I was able to conduct with the given data. They were: (1) engagement in multi-dimensional, (2) teachers switch between description of individual and whole-class engagement, and (3) these master teachers did not feel many of their colleagues fully understand student engagement. One of these meta-themes is that while participants may differ in describing which elements make up engagement, each teacher recognizes that student engagement is multi-dimensional. No single teacher outwardly expressed that student engagement has many contributing factors, but every one offered multiple pieces of the student experience to comprise engaged learning. Ms. Brown, for example, focuses mostly on elements of *interest and positive affect* and *engaged behavior*, while others like Ms. Gray cited up to five distinct factors, each with many underlying or sub-processes. In any case, no teacher gave a one-dimensional answer as evidence for *Research Question One: How do master teachers conceptualize student engagement?*

Teachers also tend to move fluidly between discussing engagement in a single student and overall class engagement. Sinatra et al. (2015) would call this a difference in “grain size”. While this trend is hard to express through a single quote, after close and repeated analysis of the data, I noted how teachers would be referencing what seemed to be engagement in an example of one student and then would switch to a description applying more to the whole class. It seems that for teachers, engagement is seen as both a whole-class and individual process, and they flip quickly between their assessment of one and the other when explaining engaged learning.

The final meta-theme is that many of the master teachers believed other teachers do not see engagement with the same level of detail as they do. Ms. Gray, for example, explained that other teachers view engagement as “compliance, but not engagement.” Mr. Dawson used the

same terminology to differentiate himself from some colleagues. Ms. Engle compared herself to other teachers and said, “I think a lot of them see it as just note-taking, or a teacher asking the questions and students responding.” Engle contrasted this idea with her own construction which places emphasis on interest and small-group peer-interactions.

Research Question Two: Sources of Engagement Knowledge for Teachers.

I posed several questions to the participants to glean data relevant to this second research question. Teacher responses fell into fairly tight patterns during the research process. Here eight distinguishable themes emerged through data coding and analysis. For this sample, the sources of knowledge about student engagement are:

1. Teacher Experience
2. Peer Interactions
3. The NBCT Process
4. Interaction with School Leaders
5. Formal Professional Education
6. Building Culture
7. District and Building-Level Professional Development (excluding NBCT)
8. Independent Research

Within these themes, I included sub-categories for the themes of *peer interactions*, *interaction with school leaders*, and *formal professional education*. In all three cases, the sub-categories were closely related enough to be synthesized into one analytical theme, but were specifically expressed during the interview as relating to one of the sub-categories specifically. For example, the theme of peer interactions includes two codes which appeared frequently in interviews: *observing peers* and *talking with peers*. The full matrix can be seen on the next page (Figure 4.2).

	1- Experience	2- Peers		3- NBCT	4- Leaders			5- Formal Professional Ed.		6- Bulding Culture	7- PD (non-NBCT)	8- Ind. Research
Name	1- Experience	2.1- Observing Peers	2.2- Talking with Peers/Co-Planning	3- NBCT	4.1- Admin	4.2- Admin. Observations	4.3- Other Leaders	5.1 Undergrad	5.2 Grad School	6- Bulding Culture	7- PD (non-NBCT)	8- Ind. Research
Anderson	✓											
Brown				✓	✓	✓	✓					
Cook	✓		✓	✓			✓		✓		✓	
Dawson	✓		✓	✓	✓	✓				✓		
Engle	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	
Frank	✓		✓		✓	✓				✓		✓
Gray	✓							✓	✓			✓
Hart	✓	✓	✓	✓								
Ian	✓	✓	✓							✓		✓
Jackson	✓	✓		✓								

Figure 4.2 Matrix Display for Research Question Two Themes

As with the category one themes related to the first research question, these themes are ranked in order of how many teachers included them in their identified sources as opposed to overall frequency of themes. When looking at the frequency totals of individual codes comprising these themes, the order would be largely the same, but not identical. *The NBCT process* was mentioned eleven times, while *interactions with school leaders* was mentioned more frequently. However, six of the ten teachers identified the NBCT process as a source for engagement knowledge while only four recognized interactions with school leaders, so *the NBCT process* theme was determined as more important to the group based on how many individual teachers identified it as a source.

Theme one: experience. When comparing the responses related to sources of student engagement knowledge across cases, the closest thing to a universal theme is experience within the practice. Nine of the ten teachers emphasized the importance of their classroom experience in helping them understand how and when students are engaged. Many teachers, like Mrs. Cook, overtly expressed the critical nature of experience as the single most important source, “I honestly learned, my degree was wonderful and everything, but being thrown in the classroom is where you learn the most.” Ms. Anderson, who cites her twenty-nine years’ experience in the profession as the one and only source for engagement knowledge, noting that she “did not learn about it in my teacher prep program” but instead cites “on the job training.” Ms. Ian agrees “I think it’s all about experience” when assessing her major sources for engagement knowledge. The other six teachers offering answers within this theme share similar sentiments.

Ms. Brown was the only teacher who does not reference engagement. After seeing this in cross-case analysis, I looked further into her interview transcripts to determine whether or not this trend, which is so apparent in the other nine responses, was truly absent in her case. In parts

of the interview she explained how her understanding of engagement has changed over time. For example, at one point she notes that many colleagues might view engagement as “just looking at assessment scores, and saying- they weren’t so engaged because they didn’t score well.” She then admitted “this is what I might have thought before entering in the profession”, and noted how her interactions with students in the past have shown her that sometimes students who do not appear engaged actually are. Her interview contained two other allusions to experience as a source for engagement knowledge; however, she never cited her experience directly. Because of this, I did not feel I could include her response within the theme of *experience*, but from my interactions with her, I do believe that her classroom experience is at least partially responsible for her knowledge of student engagement.

Two additional trends appeared within this theme; neither warranting their own code or sub category, but they stand worth mentioning within the findings for this theme. The first trend is several of the participants make special note to describe their understanding of engagement through experience as “a journey” (Gray), a “trajectory” that “was gradually sloping upward” (Dawson), or an “evolution” (Ian). Teachers who cited experience would, in this case, make special note on the gradual influence it has on their engagement knowledge over the years. The second commonality in many answers is the expressed importance of experience over other factors. Teachers were not asked to rank or compare sources when determining how they developed their knowledge of engagement, but many cited experience as specifically more important than traditional schooling. (ie. Anderson, Cook, & Jackson) Other times they stated simply that experience was the most important way to learn about engagement (ie. Anderson, Cook, Engle, & Gray). This emphasis of one source over other does not occur within any of the other seven thematic categories.

Theme two: peer interactions. As previously mentioned, the theme of *peer interactions* was divided into two sub-categories: *peer observation*, and *talking with peers*. For this second theme related to the research question of sources, seven of the ten participants saw collegial relationships and interactions as important in developing their own understanding of engagement. In terms of the role of *peer observations*, Mr. Hart gave an illustration of this source. He explained how he would walk into a fellow physics teacher's room "I would just come in during his class and observe and circulate", and while he did not really need to talk to the teacher about the topic specifically, this observation "is absolutely a conversation about engagement." When asked how she learned about engagement, Ms. Ian explained, "I love to watch other teachers.... We have been encouraged to observe other teachers, and that has been so powerful, because I've taken away a lot about [engagement]." Other teachers giving answers within this theme showed a natural tendency to informally observe colleagues, and, according to the participants, peer observations led to a deeper understanding about engagement.

Besides observing peers, teachers learned about engagement from talking to colleagues about the subject. Five participants pointed to these conversations as a source for engagement knowledge, either through informal talks or co-planning sessions. Interestingly, many explained these dialogue occurs "down the hall" (Hart). In Ms. Ian's case, teachers "are always out in the hallways saying 'Gosh this didn't work!' 'This bombed!'", and she ultimately cited these conversations as major sources for engagement knowledge in her practice. Dawson noted the importance of "hall duty in the morning" as a time when he converses with colleagues about "instruction and engagement." Within this category, some teachers recognized the importance of observations, others conversations, and Engle, Hart, and Ian took time to reference both as sources for engagement knowledge.

Theme three: the NBCT process. Six teachers recognized the National Board Certification process as a contributing factor in their understanding of engagement. Ms. Brown, pointed towards the NBCT process as a major source immediately when asked about the source for their engagement knowledge; Ms. Jackson offered a similarity definitive answer suggesting a strong assertion towards the NBCT as a formative source. Conversely, Cook, went on to explain things like experience, in-building professional development, and collegial interaction, and then added on “All that, and National Boards.” Dawson, Engle, and Hart provided answers following the same pattern where each participant identified other sources first then mentioned the importance of the NBCT process in supporting their knowledge of engagement.

Participants who looked towards National Board as a source for their conceptualization tended to explain, like Mr. Dawson:

Experience and the NBCT process certainly makes you think about every single thing you do.... I'm always trying to tweak things, and it's that tweaking to recognize what's working and has been important. But going through that year with NBCT was huge.

Engle also explained that “NBCT definitely focuses on creating engaging lessons and that was something that I really think I worked on when I had to submit my two lessons that were recorded.” Brown said the NBCT process “helped me tune in” on recognizing engagement. None of the six teachers pointed to a specific framework or theory offered up through the National Board process, even when asked to explain how the process supported their knowledge. Instead they referenced an increased sensitivity to instruction afforded to them by participating in the program, like Mr. Hart who declared “my awareness was heightened about student engagement through that process.”

Theme four: interactions with school leaders. Not only are peers important to developing engagement knowledge in the sample, the impact of school leaders in supporting how

teachers view engagement was also recognized in four cases. Ms. Brown, Mr. Dawson, Ms. Engle, and Ms. Frank identified specific personnel, both within building and with the district, as people who helped form their understanding of student engagement. For Ms. Brown these interactions occurred during observations by assistant principals, departmental specialists, and department chairs. Ms. Engle also cited observations made by the school principal, along with follow-up, mandatory, post-observation conferences. In the CAPS district, supervising administrators, content specialists, and department chairs conduct periodic and pre-planned formal observations of teachers. The protocol also includes these post-observation conferences, and this system was shown to have impact on the teachers' ultimate understanding of student engagement.

Two of the teachers at Ford Middle, Mr. Dawson and Ms. Frank, work in the school's science department, which is under the supervision of the school principal. Both Dawson and Frank commented explicitly and adamantly that the school principal had a major impact on how they viewed engagement. When I asked Dawson "Do you hear student engagement talked about much?" He explained, "I feel like one of the things that our principal focuses on in walk through processes is student engagement." As I outlined in Dawson's narrative, the principal includes a follow up conversation in conferences about the difference between "engaged" and "compliant" learning. Frank does not mention this distinction, but recognizes "The main [place I hear about engagement] is the principal though. I feel like there is always a voice in the back of my head saying- what are the kids getting out of this?" I probed to see if she could explain his process more, but even then she did not echo Dawson's comments on engaged vs complaint learning, but the principal's influence was still clearly expressed by Ms. Frank. Ms. Ian, the third teacher at

Ford, did not mention the principal specifically in her interview or reflection, but as a reading teacher she likely is overseen by a different administrator.

Theme five: formal professional education. *Formal professional education* through either graduate schooling, undergraduate work, or teacher license program is a common experience throughout all participants, and in fact through all licensed teachers in the CAPS district. Three teachers pointed toward this experience as a contributing factor to their knowledge of engagement. Engle believed that some of her understanding of engagement came during undergraduate lesson planning. Gray explained “we hear a lot about it in grad school. You know how do we keep kids engaged... I remember those things from undergrad too.” Frank also noted, “I have to feel like maybe my grad school got me going” when she explained her source for engagement knowledge. However, in all three cases, the teachers elaborated by commenting how “it doesn’t seem to translate very well into the classroom.” (Gray) In fact, Ms. Anderson and Ms. Cook made a point to tell me they did *not* learn much about engagement in their formal professional education. Here the richness of my data collection helps a great deal in analyzing this theme. While three teachers cite it as a source, all three explain professional education is, at best, not a large contributor to their overall knowledge, and two made commentary as to why it should not be considered a source for them at all.

Theme six. building culture. A discussion of the Ford Middle teachers transitions well into the next theme of *building culture*. While two of the three participants working at Ford Middle School pointed to the administration as a contributing factor in their engagement knowledge, all three (Dawson, Frank, and Ian) commented on the school’s culture when explaining their sources. Ms. Ian explained of Ford Middle:

I think we are all about [engagement]! That’s the thing here at Ford- I’ve never been in a school where I feel like I’m in college again! That first realization that everybody is smart

here- everybody is a great teacher- there are no slackers. And that's different than any place I've ever been, so I think as a faculty yeah- I think we are all about it

Ms. Frank added to these sentiments by explaining a feeling of competitiveness within the school to teach engaging lessons, and Mr. Dawson explained that “there is a growth mentality in this building... and it's continuing to grow.” All three teachers have worked in at least one other school within the district before coming to Ford, and each told me the building is different than their previous school in terms of engaging instruction and collaboration. Ms. Engle, who teaches at Monroe High, said that she too attributed some of her knowledge to “great teachers here at the school and the supportive environment” when talking about how her principal and colleagues were trying to focus on increasing engagement after reviewing survey data of disengaged students. For the three teachers at Ford Middle and Ms. Engle at Monroe High, the overall school environment has helped shape their conceptualizations of the construct.

Theme seven: professional development (non-NBCT). Within the CAPS district, professional development (PD) programs are offered both at the building and district level every year. Some programs are initiated from the top-down, like district supported CAPS 21 lesson program, encouraging teachers to use rubrics to design high quality lessons which are in turn recognized and awarded by the division. Others come from grass-roots programs within the building, like teacher professional learning communities. Two teachers Ms. Engle and Ms. Cook identified these types of programs as contributing sources to their knowledge of engagement. Interestingly, both Engle and Cook recognized several of these PD programs in their answers, while the other participants did not cited this theme at all. Both teachers have participated and won CAPS 21 awards, and cited the program as helpful in their construction of student engagement. Cook also pointed to district-level English trainings as a source for her knowledge. Engle explained at length the importance of building-directed professional learning communities

as one of her sources of engagement knowledge as well. It may be worth noting these two teachers are of very similar age and experience in the profession and teach similar subjects within the English content area, but it is unclear if any of these are contributing factors in their notation of district and building level PD as a source.

Theme eight: independent research. For the final thematic category for sources of engagement knowledge, both Ms. Gray and Ms. Ian cited *independent research* as a source. As with Ms. Cook and Ms. Engle, these two teachers teach similar subjects—middle school reading, though Ms. Gray also teaches reading in high school. Gray and Ian both explained that they make a regular habit of reading professional literature to expand their practitioner knowledge, which they say includes their understanding of engagement. Surprisingly, both were so enthusiastic about this practice that each one showed me what they were reading during their respective interviews. Gray and Ian cited this as a major source of their engagement knowledge, but neither can recall reading a specific theory of engagement or a work devoted solely to the nature of student engagement within their research.

Chapter Five: Discussion

Discussion of Results

In her concluding statements within the final article of the *Learning and Instruction* special issue on student engagement (vol. 43), Monique Boekaerts reflected on the work of scholars of student engagement, and identified two trends. The first as “methods of capturing process data as well as methods of analyses of complex data sets have greatly improved” within the field of engagement research (p. 82). However, she also notes a negative trend:

Engagement research is characterized presently by specialization, fragmentation, and proliferation rather than synthesis. Yet, it is synthesis that is needed. Without synthesis we cannot answer the question of whether use of the ‘engagement’ construct creates more confusion than it helps us understand phenomena in the classroom. (p. 82)

When analyzing the results of this study, it is my hope to assist the field in moving towards the synthesis of theory for which Boekaerts calls. While this work is in many ways limited, it serves to build upon decades of theorizing and academic study of engagement by incorporating the ground-level perspective and experiences of ten expert practitioners, all of whom saw engagement as an important part of their daily work with students. In this section, I conclude the study with a discussion of the results directed by its three guiding research questions and informed by a conceptual framework supported in the literature and my own attempts to design as thorough of an examination as possible within its context. I then explain what the study is not by listing and explaining the work’s limitations. Finally, I make recommendations for future research and educational practice based on this work and the body of work informing it.

Teacher Constructions of Engagement Compared to Theory

Two of the research questions for this project aim to identify teacher constructions of student engagement and compare these answers to theory. They are the first and third research questions for this study which are:

4. How do master teachers conceptualize student engagement?
and
3. How do master teachers' conceptualizations of engagement compare to current theory?

I will interpret these findings related to research question one through both my knowledge of the data and the prevailing theories of engagement. Then, using the same literature of engagement, I will compare the teachers' theories to the frameworks proposed by scholars of engagement to see specifically how the new data aligns with present constructions within the field to provide an answer to research question three.

How master teachers conceptualize student engagement. Master teachers noted seven major elements of engaged learning. They are:

1. interest and positive emotions,
2. engaged behaviors,
3. social interaction,
4. application/relevance, and real world connection,
5. deep and strategic thinking and understanding,
6. student-teacher rapport,
7. and student control over the learning environment.

No single teacher included all seven elements. In fact, only two of the themes—*interest and positive emotions* and *engaged behaviors* appear in all constructions, while one theme—*student control over the learning environment*, appears in a single instance.

Besides Ms. Brown, who only focused on two elements—though she elaborated on these extensively, eight teachers identified five of these elements in their constructions. Mr. Hart, included six of the seven elements in his definition of engagement. The constructions always included some sort of positive affect, and engaged and on-task behaviors as part of engagement. When Fredricks and colleagues first outlined a multi-dimensional model for engagement (Fredricks, Blumenfeld, & Paris, 2004) the sub-processes of *affective engagement* and *behavioral engagement* were the two most commonly identified aspects in previous literature. The constructions of these teachers supported Fredricks' original assertion by identifying the first two themes of *interest and positive emotions* and *engaged behaviors*. Because of this, it can safely be determined that, in this case, master teachers saw engagement as both incorporating positive or enthusiastic feelings as well as general participation and cooperation during instructional activities; in other words, they all saw engagement as both affective and behavioral.

Nine of the ten teachers included three more elements in their constructions, again with the exception of Ms. Brown. In nine of the cases, some sort of social interaction was also included. They pointed out the importance of student questioning, small-group interaction, and peer to peer communication in overall student engagement. Fredricks, Wang, et al. (2016) saw a similar trend in their qualitative work, but wondered whether or not social interaction support student engagement or was a part of it. Other scholars have previously theorized on the presence of this type of social engagement as a part of an overall model (Jarvela et al., 2016; Linnenbrink-Garcia et al., 2011; Finn & Zimmer, 2012). For these master teachers, the importance of social interaction was expressed over and over again. In some cases, like Mr. Hart, social interaction was the single most important factor in his construction. Another thematic element from this

study is the inclusion of perceived positive *student-teacher rapport*. This rapport was explained differently than routine peer-to-peer interaction and was seen in five of the ten constructions. The element includes feelings of trust, respect, and availability of between the teacher and student. This relationship is based on a more specific type of social interaction, one where the student interacts positively and adaptively with the teacher.

When looking at the prevalence of classroom social interactions as a part of student engagement in nine cases alongside the expressed importance of student-teacher rapport in half of the cases, it can also be said that master teachers in this study construct student engagement with a sub-process of *social engagement* as well as *affective*, and *behavioral* processes. Specifically, this social engagement incorporates student social interactions during the lesson, both with peers and with teachers, and is indeed part of how they see engagement as opposed to an accelerating process which promotes student engagement.

Two of the remaining three elements, *application*, *relevance*, and *real world connections*, and *deep and strategic thinking*, have precedent in the literature as related themes within a single sub-process of *cognitive engagement*. Fredricks, Blumenfeld, and Paris (2004) initially described cognitive engagement in a way more closely aligned with the deep and strategic thinking theme found within this work; however, they do explain that cognitive engagement incorporates a level of investment or perceived importance from the learners. When Conner and Pope (2013) measure levels of cognitive engagement in students they lean more towards stressing the importance of student connection of knowledge and perceived relevance in their model. If these two themes of *application*, *perceived relevance*, and/or *real world connections*, and *deep thinking and understanding* are merged into a meta-theme of cognitive engagement, nine of the ten teachers would have included it in their construction. Again, it could

be presumed that overall teachers in the study see cognitive engagement as a part of their construction, but in this case special emphasis was made for the presence of “real-world connection” in fully engaged learning.

Finally, one teacher, Ms. Cook, included *student control over the learning environment* in her answer. While no other teachers made a similar inclusion, as previously stated her adamancy on this point should not be overlooked. Though it could not be said that all teachers in this study see control as a major element of engagement—a concept closely linked with Reeve’s idea of *agentic engagement*, it must be noted that in at least one case a master teacher conceptualized engagement by incorporating student control.

In the descriptive narratives and the figure displaying teacher conceptualizations by theme, I show how each single master teacher defined student engagement, but in offering a holistic response to the first research question, I can make the following conclusions. First, all master teachers in the study define engagement through affective and behavioral sub-processes, and one of the teachers used only these two processes in her construction. Second, a vast majority—nine of ten—master teachers also included *social engagement* in their construction emphasizing peer-to-peer interactions, positive student-teacher rapport, or both. Third, a vast majority—nine of ten—master teachers included the sub-process of *cognitive engagement* in their construction, but their responses varied on stressing either the deep and strategic thinking portion of cognitive engagement or real world connection between classroom knowledge and other learning or experiences. Finally, a single master teacher saw student control as a critical element of student engagement.

How master teachers’ conceptualizations of engagement compare to current theory.

In interpreting the data related to master teachers’ conceptualizations of engagement, I already

have initiated the process of synthesizing theory with collected data. However, to answer research question three, I will systematically compare each of the major theories of engagement, including the ABC model, social engagement sub-process, agentic engagement sub-process, flow theory, and the Schlechty model, to the teachers' responses. This will allow me to see which theories best align with the teacher responses, and which theories seem contradictory or incomplete as encompassing models of engagement. To help my own understanding and to effectively communicate the findings to readers, I created a data display shown in Figure 5.1. My methods and logic for determining whether or not teacher conceptualizations fit each theory will be explained below. The complete display matrix is shown on the next page.

Name	Grade	Subject	Affective	Behavioral	Cognitive	All ABC	Social Engagement	Agentic	Flow	Flow as ICE	Schlechty
Anderson	8th	Math	✓	✓	✓	✓	✓			✓	
Brown	9th-12th	Business	✓	✓						✓	
Cook	9th	English	✓	✓	✓	✓	✓	✓		✓	
Dawson	7th & 8th	Science	✓	✓	✓	✓	✓			✓	✓
Engle	10th	English	✓	✓	✓	✓	✓			✓	
Frank	7th & 8th	Science	✓	✓	✓	✓	✓			✓	
Gray	6th - 12th	Reading	✓	✓	✓	✓	✓			✓	✓
Hart	11th	Math	✓	✓	✓	✓	✓			✓	
Ian	6th	Reading	✓	✓	✓	✓	✓			✓	
Jackson	9th-12th	Science	✓	✓	✓	✓	✓			✓	

Figure 5.1 Matrix Display for Research Question Three Themes

Master teachers' responses compared to the ABC theory. With ABC as the dominant model within the research (Eccles, 2016; Ryu & Lombardi, 2015; Shernoff, 2016), it was anticipated that at least some of the instructors' constructions might align with the theory. Because of the prevalence of the theory in current engagement research and this expectation, I used the ABC model to guide my observation tool and initial codebook. In many ways, the teachers' answers fit very well with this theory, but the ABC model is not an entirely perfect framework for the constructions of the master teachers.

The teachers agreed with Fredricks' ABC model in that affective and behavioral sub-processes are key elements to fully engaged learning (Fredricks et al., 2004; Fredricks, Filsecker, et al., 2016). I made an earlier case that the two universally recognized themes in teacher constructions were interest/positive emotions and engaged behaviors, and that these categories neatly align with affective and behavioral engagement respectively. When looking at the data, it is hard to construct any viable counter arguments that master teachers in this study do not see affective and behavioral engagement as critical pieces in student engagement, a trend seen in current literature (Azevedo, 2015; Sinatra et al., 2015) and in Fredricks and colleagues' original work establishing the ABC theory (Fredricks et al., 2004).

Cognitive engagement is usually seen by scholars of the ABC theory as a more elusive sub-process (Appleton et al., 2008; Conner & Pope, 2013; Fredricks et al., 2004). Typically, cognitive engagement is characterized by deep or strategic thinking and the students' investment in the lesson (Appleton et al., 2008; Fredricks et al., 2004). In my initial codebook for this work (from Fredricks, Wang, et al., 2016), codes for cognitive engagement include thinking hard, trying to understand/process ideas, using strategies to learn/understand, and persisting/using new strategies. These same codes were incorporated in work's theme of *deep and strategic thinking*,

and were included in the definitions of six teachers from the present study. However, the Fredricks, Wang, et al. (2016) codebook also includes codes of “applying/connecting ideas” and “taking apart and integrating ideas.” When speaking with the master teachers, I saw a separation between these types of cognitive behaviors in students—ones that related to connection and application of ideas, and pieces of cognitive engagement related to deep or strategic thinking. In addition, the belief that engaged student apply ideas was almost always aligned with the concept of “real world connections”.

Based on the findings of this study, it seems that cognitive engagement can be seen in two distinct ways, through deep and strategic thinking and through real world connections and applications. Fredricks does not overtly state this fact in her work, though her 2016 code book (Fredricks, Wang, et al., 2016) suggests both elements have a place within cognitive engagement. Conner and Pope’s work does place emphasis on the role of applicative thinking and idea integration with real world scenarios within cognitive engagement (2013), but generally an explanation of cognitive engagement is somewhat vague and reliant on existing theories of motivation and cognition like self-regulation or goal theory (Eccles, 2016). Still, I ultimately feel justified in including both real world connections and deep/strategic thinking as two distinct pieces of cognitive engagement, because of their association in works like that of Conner and Pope (2013) and their inclusion in the cognitive engagement subscale of Fredricks, Wang, et al. (2016), which was built from qualitative interviews of teachers. I do, however, wish to be clear that in this case, cognitive engagement is explained as two distinct factors of *deep and strategic thinking* and *application, relevance, and real-world connections*.

Why is cognitive engagement defined differently depending on whether the theorist is an educational psychologist or a teacher? I have reflected and mused upon this question many times

throughout this project. It seems that, to educational psychologists, cognitive engagement to serves as a sub-process of engagement housing many aspects of theories of motivation and learning like self-regulation, metacognition, and goal theory. Eccles (2016), Boekaerts (2016), and others commenting on the theoretical landscape of engagement have made similar claims (Azevedo, 2015; Sinatra et al., 2015). Teachers may have some exposure to theories or, more likely, classroom strategies for fostering deep and strategic thinking; this pedagogical knowledge is even more likely to be present for master teachers. However, connecting learning to previous experiences, the world outside the classroom, and other knowledge is an incredibly effective way to capture learners' attention and engaged them. Hence, they may be likely to emphasize idea application and relevance within cognitive engagement more so than a scholar would emphasize it. On the other hand, scholars familiar with goal theory and metacognition may see their place in a construction of cognitive engagement more easily than a teacher unfamiliar with these theories. In any case, these master teachers saw both *deep and strategic thinking* and *application, relevance, and real world connections* as important parts of engagement, and the two align well under an umbrella of cognitive engagement.

With these two elements combined, nine of the ten teachers included elements of cognitive engagement in their responses. This means nine of the ten teachers saw engagement as incorporating affective, behavioral, and cognitive processes, largely confirming the ABC model. Ms. Brown, the negative case in this instance, did not include cognitive processes in either her lesson reflection or interview. I noted several instances where she actively encouraged real world connections in her classroom. For example, she asked students to apply the theories of business ethics from the class to a local corporation known by most of the class, so I do not think the concept would be foreign to her instructional approach. Still, she did not outwardly include

cognitive engagement, through either a description of deep/strategic thinking or real world connections, in her definition, so she remains the single outlier in teachers confirming the ABC theory through their constructions. With this exception in mind, I can still conclude that the master teachers included elements of affective and behavioral engagement in their constructions, and the majority also included cognitive engagement as a part of engagement.

A problem with the ABC theory remains though. Unlike the Fredricks model (Fredricks, et al., 2004), while master teachers see engagement as including affective, behavioral, and cognitive engagement, they do not *only* see it that way. Nine of the ten teachers, all of whom gave constructions that have elements aligning with affective, behavioral, and cognitive engagement, gave at least two additional elements of engagement in their definitions. While the ABC model provides a valuable framework for understanding how master teachers see engagement, other models may fit as well or better than Fredricks'.

Master teachers' responses compared to social engagement. The Fredricks, Wang et al. (2016) study and the Wang et al. (2016) study are essentially two parts of a mixed-methods inquiry. Creswell would define the two works as part of a single mixed-methods explanatory design for instrument development (2006). It uses qualitative data collection and analysis from the teacher interviews to create a survey instrument for student engagement. This understanding of the work's methodology is important in the ultimate comparison of this study to theory of social engagement. Fredricks and Wang's team found a trend in their qualitative data remarkably similar to what I discovered in data analysis of master teachers' constructions of engagement. For their team, the ABC model was not comprehensive enough for a full survey of engagement (Wang et al., 2016). Based on their qualitative findings (Fredricks, Wang, et al., 2016), the team elected to include *social engagement* as a fourth element to their model. This most recent

construction used by these scholars subscribing to the ABC model is, in reality, an ABC+S framework, that includes affective, behavioral, cognitive, and social sub-scales. Other scholars have studied and argued for the presence of social engagement as well (e.g. Linnenbrink-Garcia et al., 2010). Based on the findings for this study, I would recommend the same inclusion as Wang et al. (2016). For these master teachers, social engagement was part of engaged learning in addition to affective, behavioral, and cognitive sub-processes. I will use ABC+S to describe this model, because some have questioned how exactly social engagement interacts with the other three sub-processes. I will elaborate upon these critiques after I explain further how the theory of social engagement relates to the data from this study.

Social engagement was seen through two thematic trends in this work. One was social interaction between peers. Nine of the ten teachers in this work offered definitions incorporating this theme. In the survey instrument developed by Wang et al. (2016), social engagement was measured on student-focused items like “I build on others’ ideas”, “I try to understand other people’s ideas in science/math class”, and “I work with others who are struggling in science/math”. These student-centered survey items relate strong to the first trend seen in master teachers, where student interactions with other students contribute to overall engagement.

The ABC+S model seen in Wang et al. (2016) does not place much emphasis on student-teacher rapport, nor does the social engagement construction of Linnenbrink-Garcia et al. (2010). Half of the master teachers, however, saw rapport as an additional important social interaction. Feelings of trust and respect between teacher and student were critical for these five, suggesting that social engagement should perhaps include student-teacher rapport as a part of the sub-process.

The comparison between the trends found in this study and the theory of social engagement is not perfect. Here again, Ms. Brown's dual-factor definition of engagement remains outside the major trend in data supporting social engagement. In addition, only five of the teachers recognize student-teacher rapport as a part of engagement. The very inclusion of this rapport within social engagement is also debatable; feeling closely connected to the teacher could be seen as related to affect and emotion as well as social interaction. In all cases but one, however, teachers recognize social engagement as important, so I feel comfortable at least echoing the suggestion of other works (i.e. Linnenbrink-Garcia, et al., 2010; Fredricks, Wang, et al., 2016; Wang et al., 2016) that social engagement be seen as a part of overall engagement. Additionally, the teachers who did incorporate rapport in their models did so with enough adamancy and certainty, that I must recognize the possibility of rapport's presence somewhere in the engagement model. Placing this theme within the parent category of social engagement may lead to future works that help determine its exact place in a meta-model to inform both research and practice.

The reason why I chose to denote this as an ABC+S model as opposed to an ABCS framework derives from recent commentary on researcher within the field of student engagement. Eccles (2016) criticizes the Wang et al. (2016) team in their placement of social engagement. While she agrees social engagement may be an important process, she explains this process may occur at a different level than individual engagement as seen through ABC. Jarvela et al. (2016) refer to this as collective engagement. Based on the teachers' responses, I did not have enough evidence one way or the other to help settle this theoretical debate, only enough to support the inclusion of social engagement as a common factor in master teachers' responses.

With consideration to the literature surrounding social engagement and possible alternative interpretations of this work's trends, I can assert master teachers often see engagement as ABC+S, and the sub-process of social engagement incorporates both peer-to-peer interactions and possibly rapport between students and their teacher.

Master teachers' constructions of engagement compared to agentic engagement. Agentic engagement theory, included mostly in the work of Johnmarshall Reeve (Reeve & Tseng, 2011), adds to the ABC framework by incorporating the fourth sub-process of agentic engagement. This form of engagement is said to be a student's active behavior and disposition that co-constructs learning. Reeve uses five items to define the task including students: asking questions, telling teachers what they like and don't like, telling teachers what they are interested in, expressing preferences and opinions, and offering suggestions about how to make class better (Reeve & Tseng, 2011). Master teacher in this study did not generally include agentic engagement in their study. While many did include student question asking as a part of engaged learning, this element could easily fall within an ABC or ABC+S model under behavioral engagement or social interactions. The remaining four elements were rarely seen in the constructions of master teachers; they did not incorporate student expression of interest or learning preferences in their definitions. Only one teacher, Ms. Cook, focused on "student control". Still, even Ms. Cook did not provide detail related to Reeve's operational definition, especially his focus on student suggestions or communication with the teacher in regards to optimal learning. Perhaps a detailed study of student constructions as opposed to master teachers might reveal more inclusions of agentic engagement, but in this work the theorized sub-process was largely absent from practitioner constructions.

Master teachers' constructions of engagement compared to flow theory. In reality, flow theory as it relates to student engagement should be seen as two different traditions within the same body of literature. On one hand there is the original understanding of flow as proposed by Csikszentmihalyi (1975/2000) who sees flow as the deeply absorbing experience of fulfillment when task difficulty coincides favorably with the individual's ability. On the other, there is the adaptation of the flow model adopted by Shernoff (2012) who uses dimensions of *concentration*, *interest*, and *enjoyment* as three parts of overall engagement. Shernoff explains these three components "are not only central to flow experience, but have also been related to meaningful forms of learning" and, more specifically, engagement (Shernoff et al., 2016, p. 53). The present study did not find much, if any, evidence to support the idea that master teachers see engagement as a powerful state of flow. There was no mention towards many of flow's traditional indicators, which would have required teachers to reference students losing track of time, or feeling deeply satisfied or fulfilled during learning. However, the components of concentration, interest, and enjoyment could be supported in all of the master teachers' constructions.

The two universal themes found in this study were the inclusion of interest and positive emotions during learning and engaged behaviors as major parts of engagement. These themes could be reorganized into incorporating interest and enjoyment—through the thematic category of interest and positive emotion, and concentration- through the thematic categories of engaged behaviors and even deep and strategic thinking. Eccles (2016) makes a similar observation when critiquing one of Shernoff's studies (Shernoff et al., 2016). She notes that concentration can align with cognitive and behavioral aspects of engagement, interest can align with affective and cognitive aspects, and enjoyment can be an affective component of engagement. In some ways, Shernoff's construction simply categorizes the same elements of engagement using different

components. However, this model through flow theory is greatly lacking in its ability to successfully encompass other themes found within this research. It makes no mention of social interaction, student-teacher rapport, or real world connections; all of which were major themes within the constructions of master teachers. To summarize, in relation to the application of flow theory to the constructions offered through this study, the traditional model of flow is not supported. The three-component model including interest, concentration, and enjoyment as a framework for engagement does coincide with all ten constructions of master teachers. However, it is less comprehensive than the theories of the master teachers, more so than the ABC model and is much more lacking than an ABC+S framework in aligning with practitioner understanding of engagement.

Master teachers' constructions of engagement compared to the Schlechty Model of Engagement. The final framework I need to incorporate in the comparison of master teachers' constructions of engagement to the literature is Schlechty's model. In chapter two, I explained how Schlechty's model stems largely from practitioner adoption and consultation from the Schlechty Center, though it is seen in some scholarly works on engagement (e.g. Saeed & Zyngier, 2012). This model sees engagement on a continuum, where high engagement takes place when students are exhibiting high levels of attention and shared commitment to the instructional goals. It is more difficult to compare the trends within the teachers' conceptualizations of engagement in this case, because the model is less robust and detailed than other frameworks like those of Fredricks (Fredricks et al., 2004) and Shernoff (2012). All of the teachers do in fact see attention as an important factor in their constructions; paying attention and being on task would be included within the thematic category of *engaged behaviors*. Commitment was not often referenced directly by the teachers, and therefore did not emerge as a

data code or overall theme within their answers, but I would not be doing justice to the data or the teachers if I assumed student commitment was unimportant in the eyes of the teachers in terms of engaged learning. Schlechty (2010) explains commitment as a student doing work “with-out the promise of extrinsic rewards or threat of negative consequences.” (p. 14) This theme was in fact echoed by some teachers, but was included in this study’s overall category of *interest and positive emotions*, and usually was accompanied by other positive feelings towards learning like student interest and enthusiasm. When examining the two major criteria from the Schlechty model of commitment and attention, most teacher constructions would align with the model, but the fit was not close enough to draw a perfect parallel between the Schlechty model and the constructions of the teachers.

However, the Schelchty model also references a part of the engagement continuum sometimes expressed during non-examples from teachers in this study: engaged learning versus compliance. In two cases, Ms. Gray and Mr. Dawson, this distinction was made using the exact terminology of Schelechty, an author who builds into his framework “strategic compliance” and “ritual compliance”. Gray and Dawson both explain that sometimes students are “committed, but not engaged” (Gray). Dawson explains that his principal uses a discussion of compliance vs engagement to help his teacher understand fully engaged learning. Gray identifies several students as committed but not engaged, while also explaining that many colleagues confuse the former with the latter. These observations were not a part of their constructions necessarily—their models were both robust, incorporating multiple dimensions for engagement, but the contrast between engagement and compliance were related to the two teachers’ overall understanding of engagement within their building context. Overall, the Schlecthy model does not hold up in comparison to the ten practitioner definitions of engagement, it lacks the details

and multiple dimensions seen in master teacher constructions. Two teachers did echo phrases directly from the Schlechty model though, so from this perspective the model aligns in part with at least two constructions.

In terms of the Schlechty models place in the overall theoretical landscape of engagement, it may again come down to varying ways to organize elements of engagement. A student who is only behaviorally engaged through the lens of the ABC or ABC+S model, would be compliant. This holds with both Schlechty's description of compliance and Dawson and Gray's interpretation of compliance versus engagement. The term compliance exists within the CAPS district as shown by Mr. Dawson, his principal, and Ms. Gray. These findings suggest the distinction between compliance and engagement could be incorporated into and explained through the ABC or ABC+S model as the singular presence of behavioral engagement without any other dimensions. By including this type of ground-level terminology and understanding of dispositions related to engagement into theoretical frameworks, an adopted model of engagement may help bridge the research to practice gap more effectively.

Synthesizing results with engagement theory. In many ways, this study addresses and confirms recent commentary within the literature on student engagement. Shernoff believes one of the reasons scholars have focused so much on researching the construct over the past decades is "at least in part because engagement is presumed to be malleable and highly influence by the learning environment." (Shernoff et al., 2016, p. 52) He also agrees with other researchers in the field claiming engagement is a "a meta-construct with many levels". (p. 52) The participants in this work confirm the present belief in the scholastic community that engagement is multidimensional (Chistenson, et al., 2012; Fredricks et al., 2004; Jimerson et al., 2004) and malleable (Azevedo, 2015; Eccles, 2016; Fredricks, Filsecker, et al, 2016; Shernoff, 2012).

While their particular constructions for engagement varied from one another, every teacher expressed a belief that he or she could greatly impact engagement based on their instructional approach and relationship with students. Mr. Dawson expressed this belief best, “Yes, you *can* generate engagement in your classroom.” The teachers also included multiple dimensions in their constructions. In no case was there a simple or short definition of the term—the participants required and employed a great deal of elaboration when communicating their beliefs about the makeup of engaged learning. These tendencies towards construct malleability and multidimensionality are right in line with the research (Sinatra et al., 2015; Fredricks, Filsecker, et al., 2016).

Teachers also tended to switch between descriptions of engagement of individual students and the whole class frequently and perhaps unconsciously. They would often provide an example first talking about how they knew a certain student was engaged, and then describing the entire class’ behaviors. This may mean they have difficulty distinguishing between the two, or that they have the ability to switch back and forth quickly and easily. I tend to believe it is the second case based on my experience and the logical hypothesis that assessing individual students and the entire class for engagement simultaneously throughout a lesson would help the teacher achieve his or her instructional goals more effectively. In any case, it may prove useful in future works to attempt to distinguish how teachers see engagement in relations to what Sinatra et al. call “grain size” (2015, p. 2). Do they see it as a whole class process or one occurring individually for each student? This work did not provide data to answer such a question, but it did reveal a possible fluidity in how teachers see engagement in all students and in a single student.

In addition, each of the teachers expressed in some way that fostering and supporting student engagement is a critical part of teaching and learning. In no instance did a teacher respond to the question of “How do you define student engagement?” with “Engagement? Never heard of it.” They believed things like “Engagement is one of the big pushes right now!” (Ms. Brown) and “That’s the main point of education- how to keep them engaged.” (Ms. Jackson) They saw engagement as related to positive outcomes of achievement, happier students, and an important part of learning even independent from its positive effects. Again this shows consistency with the literature who also supports the importance of engagement on learning outcomes (Ladd & Dinella, 2009), well-being (Shernoff et al., 2004), and an appropriate educational goal in and of itself (Shernoff, 2012).

Though no two definitions from educators were expressed in the exact same way, ultimately their common themes may fit in one particular framework outlined in the literature. The overall definitions of these teachers align best, though not perfectly, with a construction that includes *affective, behavioral, cognitive, and social* engagement (ABC+S). As I have outlined in this chapter, the theme of *interest/positive emotions* corresponds well with *affective engagement*; *engaged behaviors* aligns with *behavioral engagement*. Cognitive engagement, traditionally one of the most difficult to capture for even for scholars of the construct (Green, 2015), would include both *deep and strategic thinking* and *real world connections*. Social engagement, in this case, would have to include both the peer-centric *social interactions* and the presence of positive *teacher-student rapport*.

This alignment is admittedly debatable. First it may be seen as unfairly forcing data themes into a framework. Cognitive engagement literature references the learners connecting of new ideas to older knowledge (Fredricks et al., 2004; Green, 2015, Sinatra et al., 2015), but this

inclusion seems more focused on application and connection of knowledge as a strategy than the real-world connection theme expressed by the teachers. Another approach could see student application of knowledge and real world connection as described in this study as a part of affective engagement, because the teachers usually associated these connections with increased interest and enthusiasm. However, I believe their inclusion under cognitive engagement would produce a better overall model that could be easily used and translated to practitioners, and this became my deciding factor when aligning the data with theory. Teachers understand the idea of “real world connections”, and use the term in practice. Incorporating such an element into the often-vague explanation of cognitive engagement—a construct that shares much with real world connections, might help to make it more clear and transferrable as part of an overall model.

The same holds true with the inclusion of student-teacher rapport in social engagement. Social engagement is a newly proposed sub-process (Linnenbrink-Garcia et al., 2011; Fredricks, Filsecker, et al., 2016). Through the work of Linnenbrink-Garcia and colleagues (2011), and the more recent inclusion of it alongside the ABC model by Wang and colleagues (2016), this dimension of engagement has focused more on peer interactions and in-class social interactions between students and the teacher. However, this current work suggests a deeper form of social engagement—feelings of trust, respect, and acceptance between teacher and student—is a part of fully engaged learning. While these feelings could also fall under the dimension of affective engagement, I prefer their alignment with social engagement. Keeping rapport with social engagement could make a teachers’ understanding of this sub-process more robust; additionally, social engagement could easily be divided in an ABCS model as peer-to-peer and student-to-teacher. This breakdown seems closer to how teachers view this part of engagement, and could

be communicated and shared more easily than burying these important processes, according to the present study, within other dimensions.

While *student control over the learning environment* does not necessarily fit this work, and the construction of one of the participants would not align with the ABCS model and instead would favor an AB model, the model of best fit in this case would be one that includes affective, behavioral, cognitive, and social emotions. This work alone is not enough to confirm the universal adoption of an ABC+S model, but it helps to add weight to recent work by Fredricks, Wang, and colleagues (Fredricks, Wang, et al., 2016; Wang, et al., 2016) that found the same four-dimensional trend in other qualitative work and used it in a survey of both teachers and students. This work suggests the gap between theory and practice may not be so large, and the work within the literature seems to be moving towards a construction closer to how strong classroom teachers view the complex phenomenon of student engagement.

Sources for Teacher Knowledge of Engagement

While each of the ten participants was able to provide a robust and detailed view of the construct, through my work with these teachers, I encountered what to me was another surprising paradox related to this instructional knowledge. Overall the constructions of engagement tended to support the idea of a multi-dimensional model of engagement very close to the ABC+S construction emerging from the complicated and sometimes contradictory literature of engagement. Each teacher also expressed that the idea of engagement was essential to their practice. However, when I asked the teachers if they had ever been exposed to a specific theory or training on engagement, all ten replied they had not. The tight commonalities in their constructions and their lack of theoretical training were surprising to me. A closer examination

of the development of this knowledge transitions well into the second research question guiding this study: what are the sources for teachers' knowledge of student engagement?

Eight major themes describing the sources of teacher knowledge of engagement emerged:

1. Teacher Experience,
2. Peer interactions,
3. The NBCT process,
4. Interaction with school leaders,
5. Building culture,
6. Formal Professional Education,
7. Professional Development (non-NBCT),
8. and Independent Research

Using the guiding conceptual framework for this project, I divide and discuss the themes according to Jones and Dexter's (2014) holistic model of teacher learning. I then use Clarke and Hollingsworth's (2002) Interconnected Model for Teacher Professional Growth (IMTPG) to inform any interpretation of how the participants leveraged this learning to change and develop their constructions of student engagement.

Formal learning activities as sources of engagement knowledge. Within the themes, three sources related exclusively to what Jones and Dexter (2014) would see as formal learning activities—the NBCT process, formal professional education, and non-NBCT professional development. In addition, because I know administrator, specialist, and department chair observations of teachers are almost always a part of a mandatory professional development and teacher evaluation plans in CAPS, the theme of *leaders* as sources of engagement knowledge is also included as formal activities.

Only three of the teachers cited their formal schooling as a source of engagement knowledge. This was surprising as eight of the teachers possessed undergraduate degrees and seven of the teachers had master's degrees in education related majors or fields. Ms. Anderson even achieved her PhD in educational leadership. Despite all this formal training, rarely was university learning cited as a place where teachers learned about engagement. In fact, several teachers made specific note of *not* learning about engagement from their undergraduate or graduate work.

This theme presents a stark contrast to the other types of formal learning. Teachers sometimes expressed they developed an understanding of engagement through school-centered or district-centered activities, like Ms. Engle and Ms. Frank who cited the CAPS21 lesson design contest as an activity which helped them better engage learners. Ms. Engle also recognized school-mandated Professional Learning Communities (PLCs) as a source; these PLCs allow teachers to choose instructional topics and explore them with colleagues in a structured, and mandated, environment. In other cases, teachers like Ms. Frank, Ms. Engle, Ms. Brown, and Mr. Dawson pointed to the importance of formal observations and post-observation conferences with administrators as formative in their development of engagement knowledge. Finally, six of the teachers pointed specifically to national board as an effective program in honing their understanding of student engagement.

So why do these type of formal activities succeed in helping teachers conceptualize engagement where formal schooling does not? The answer can be easily explained through the IMTPG model. All of the effective formal strategies—localized formal professional development, structured observations, and the NBCT process—expose teachers to new strategies, encourage them to implement them in practice, and examine the consequences. While

all formal activities, including university study, take place in what Clarke and Hollingsworth would call the external domain (2012), the three effective types of formal development work require or necessitate transfer of knowledge into the domain of practice and domain of consequence. During this time, the teachers enact based on new knowledge and reflect upon the experience; in the IMTPG this enacting and reflection are the two key mediating factors in developing and changing practitioner knowledge (Clarke & Hollingsworth, 2002).

To provide context grounded in the data, the specific sources cited within the themes clustered as formal professional development relate strongly to enacting new strategies and especially reflecting on practice. The CAPS21 and PLC programs for in-building professional development require teachers to create new lessons or adopt new classroom practice. For CAPS21, these lessons are reviewed and critiqued by the school or district, and teachers are asked to reflect upon the process. PLCs encourage teachers to experiment with new methods and discuss the new classroom experiences with peers. It is easy to see how these align well with how the IMTPG model explains adoption of new teacher knowledge based on the heavy presence of its two mediating factors. The formal observations cited by three teachers are, in CAPS, always followed by post-observation conferences, and having been trained on the district protocol I know school leaders are required to allow and encourage teachers to reflect on their own progress rather than receive one-way feedback.

While the district and schools of course offer other types of professional development, these were left absent from the instructors' discussion surrounding sources of engagement knowledge. Most other initiatives are top-down, teacher-as-student centered learning, where new practices are explained with little follow up. Both Jones and Dexter (2016) and Clarke and Hollingsworth (2002) note the prevalence of these type of activities across the profession, and

provide evidence to where they have been largely deemed ineffective over the decades. It is important to note the absence of mentioning of traditional “one-shot” professional development as a source of engagement knowledge in this study. When teachers do learn about engagement from leaders or in-building PD, it occurs through initiatives that link closely to actual classroom practice and support reflection on experiences and outcomes.

The teachers themselves explain why formal professional education in colleges or universities is lacking. Ms. Anderson explained engagement “is almost not something you learn in a textbook”. Gray, a current graduate student noted that she hears a lot of people talking about engagement in college, but “it doesn’t seem to translate very well in the classroom.” When teachers like Ms. Frank did cite their formal education as a source, it occurred through creation of lesson plans or student-teaching; both experiences are closely aligned with actual practice and implementation of ideas.

The largest contributing factor in this category was the NBCT experience though. With over half of the teachers pointing to this as a source of their engagement knowledge, some of whom did so adamantly, I was at first worried that the NBCT process might offer specific training on engagement. Though I did not remember any specific framework from engagement proposed by NBPTS, I went back through specific guiding standards and requirements for NBCTs. I found no reference to any of the literature on engagement, or even a specific explanation of what student engagement was. Why then do master teachers see the NBCT process as an important source for their understanding of student engagement? It is how the certification process impacts the applicant’s thought process that is most effective. Mr. Dawson explained “NBCT process certainly makes you think about every single thing you do.” Ms. Ian specifically pointed to the reflective lesson descriptions during certification as a source because

“my awareness was heightened about student engagement through the process.” Ms. Brown even suggested that the NBCT process may have driven her to adopt a multi-dimensional understanding of engagement as opposed to a singular dimensional view when she said “I don’t think I was tuned into different aspect of engagement before that.” The data aligns neatly with the IMTPG theory; the National Board method can effectively help teachers understand student engagement more fully, because it encourages experimentation, assessment of outcomes, and demands reflection throughout the process.

In terms of construction of engagement knowledge, this study suggests that formalized professional learning can be effective in helping practitioners develop a strong understanding of student engagement as long as those formal learning opportunities include ties to actual classroom practice and foster reflective thought. This finding supports others within the literature of professional knowledge in teachers, which proposes the same requirements for the development of other understandings and methods (Darling-Hammond, 2006; Desimone, 2009; Jones & Dexter, 2016).

Informal learning activities as sources of engagement knowledge. The two data themes coinciding with informal learning activities were *peer interactions* and *building culture* as sources of engagement knowledge. The two themes are very closely related, but they remained unmerged in my analysis because of unique factors related specifically to building culture. Peer interactions were the second most cited source of professional development after classroom experience. Jones and Dexter (2016) explain that peer-to-peer conversations and collaboration are generally seen as valuable learning experiences by practitioners and are often used as just-in-time support to help teachers quickly address an instructional problem or question. While little reference was made to just-in-time needs from the master teachers, many

found peer observations or conversations as an important factor in their overall understanding of engagement. The analysis here is fairly straightforward. Teachers learn from one another, either through talking with or observing each other. Four of the ten teachers explained they regularly take time to walk through colleagues' classrooms to see how others engage learners. This may suggest that teachers can learn about engagement through reflection upon *other* teachers' domain of practice or domain of consequence and use these reflections to change the beliefs and understandings within their own personal domain. In addition, co-planning activities or even informal "hallway conversations" may be effective, because they expose teachers to new external domains or they allow teachers avenues to elaborate and reflect on practice.

An interesting category of informal development within the data is the importance of school culture, especially the culture seen at Ford Middle School. Ford's principal encourages teacher reflection on engagement in his "engagement versus compliant" discussions. It cannot be determined whether these discussions are the genesis of a culture focused on engaging students as described by the three participants, or if the school simply has a population of strong and competitive instructors as theorized by Ms. Frank. In terms of assessing how school instructional culture impacts the thought process of individual practitioners, it might be that the school has more experts to support other informal learning or an increased awareness of engagement and instruction overall encourages more experimentation and reflection. In any case, instructional culture was a strong source of engagement knowledge for all three teachers at Ford and Ms. Engle from Washington Middle. Both schools also serve wealthier communities within the CAPS district, and this too may somehow impact the culture of teaching and learning. Without more data though, any discussion of why these schools have cultures conducive to informally helping teachers understand engagement is but speculation. It is safe to conclude

though, as an informal source for engagement knowledge instructional culture within a school building could be a strong factor.

Independent learning activities as sources of engagement knowledge. Jones and Dexter (2014; 2016) often explain independent learning activities through teacher internet queries, usage of social media, or consumption of literature. With their holistic model, Jones and Dexter explain that independent learning is not necessarily solitary learning; practitioners, can engage communities outside of school digitally through social media or online communities. Within this study, only two teachers identified sources of independent learning of engagement through the reading of instructional literature, while none made reference to internet reading or other digital sources. Filtering this source through the IMTPG model would see the reading of scholarship on teaching as external domains providing new strategies to be used in the domain of practice. However, another source of independent learning not overly incorporated in the holistic model from Jones and Dexter emerged as the single most important source of knowledge on engagement.

Nine of the ten teachers identified classroom experience as a source for engagement knowledge, and many designated this factor as the single most formative method for understanding student engagement. This idea is not wholly surprising in and of itself; teachers learn what works and what doesn't through practice. What is interesting is that through their practice, these teachers seemed to land on a definition of engagement closely aligned with current theory. While classroom experiences fall under the domain of practice within the IMTPG, for these teachers the change in their understanding of engagement within the personal domain in the framework eventually became an external source of knowledge. They used trial-and-error over years of work—experimenting, assessing results, and reflecting on those results—

to slowly create a useable framework for engagement on their own. They noted this process was informed by other experiences, both formal and informal, but ultimately much of their understanding of engagement came from practice. These teachers are good at engaging learners. I saw this in my observations of their classes, heard it in my conversations with them, and can support it through their achievement of NBCT which has been shown as an effective marker of high-quality teaching (Cavalluzzo et al., 2015; Cavalluzzo, 2004). According to the teachers themselves, they developed this ability to engage learners more through independent daily experimentation and reflection than study.

Sources of engagement knowledge: what is absent and concluding trends. No matter the type of learning, formal, informal or independent, the key factor for these master teachers was learning experiences that fostered reflection and experimentation with practice. To one outside the profession, it may seem that teachers identified many sources of engagement knowledge. In reality, today's teachers are almost always required to have some sort of formalize pre-service training at either the university level or the completion of a licensure program in combination with a non-education college degree; they also are legally required to complete an average of 120 hours of in-service development every five years (Hill, 2007). I know that within the CAPS district, many teachers, especially dedicated ones, exceed this mandate. For a group exposed to so many varying knowledge sources, the few impactful experiences were the ones requiring teachers to actively adjust and develop their mindset over time. Nevertheless, through these experiences and without direct instruction on engagement, the teachers were able to develop rich and robust understandings of the construct. Perhaps more surprisingly, these constructions were rarely in direct conflict with current theoretical frameworks.

While examples could be found within all three dimensions of the Jones and Dexter framework, one important trend in the data was the absence of any formalized training on engagement. Not a single teacher could recall exposure to a specific theory of engagement. Without mentioning this exclusion, one might think any attempts to teach engagement theory in a formalized professional development lesson or college education course a failed venture. I again include Ms. Gray's quote in response to this lack of formal training, because her words were perhaps the most impactful to me as the researcher when trying to address this research question:

Me: So you never learned a specific theory of engagement through school or PD or anything?

Ms. Gray: No I didn't, but I wish that I had. I think it would have been a much shorter journey if I had. And I feel like it's something that should be teachable, instead of having to spend 10-15 years figuring it out. That's a lot of kids who weren't engaged.

This sentiment brings to head the final piece of this analysis. The teachers' reliance on other sources of knowing does not mean attempts at top-down instruction on engagement or a more formalized, theory-based, approach to engagement learning would not help teachers learn to engage students, but the data indicates that in the case of these ten teachers, no program, method, or model has been more effective than years of experience or reflectively focused learning experiences.

Limitations

While the findings from this work will ultimately enrich the academic literature of student engagement, it is important to realize the limitations of this research. First, the study's sample teachers may present confounding factors which impacted the results. All of these teachers volunteered, from a pool of 97 NBCTs in the CAPS district. Their willingness to participate may have correlated with their high levels of professional activity and strong instructional practice. Other participants, even with an NBCT certification, may not have been as

strong instructionally or as experienced with diverse sources of engagement knowledge. In addition, only two of the teachers were male and all ten of the teachers listed “white” as their race/ethnicity. While gender and ethnicity does not likely impact how a teacher comes to understand student engagement, it would have been nice to offer perspectives from a less homogenous sample of mostly white women. Also, three teachers worked in the same building (Ford Middle), and this school in particular seemed especially focused on student engagement. The expressed importance of engagement and school-specific knowledge sources reported in the data may be overrepresented due to this factor, but it is worth noting each of the three teachers had also worked in at least one other school before Ford.

In qualitative inquiry, it is often said that the qualitative researcher *is* the instrument (Patton, 2002, p. 61). Much of the data collection, analysis, and interpretation resulted from specific research decisions I made throughout this process; a different researcher might have made completely different conclusions when faced with the same choices. While I tried to account for as much researcher bias as possible, it is likely that the findings still reflect some of this bias. This is especially true in regards to the ABC theory of engagement. I started this project believing the ABC framework to be the dominant model for the construct and the model best suited for eventual practitioner adoption. I used an initial codebook and observation protocol based on this theory as well. I made multiple efforts to account for this, including having an outside coder check both my interview protocol, interview behavior, and data coding to look for allegiance towards the theory. I also tried to include every major framework for engagement in the analysis and discussion of results to be sure they were considered thoroughly when interpreting the data. Ultimately though I made the conclusion that the ABC + S model was

closely supported in master teachers' constructions, and some of this belief could stem from my own bias from the onset of this project.

During data collection, I developed a very real and strong rapport with these practitioners. While ultimately this rapport was beneficial in helping me obtain rich data, it may have also influenced the responses of the participants in a way that did not reflect their actual beliefs. Teacher, especially master teachers, like talking about practice and usually consider themselves knowledgeable in their profession. It is possible that a social-desirability bias caused teachers to overemphasize the importance of engagement in their practice or over theorize their definition of the construct in an attempt to sound like a good teacher.

Finally, though the purpose of this work was not to obtain generalizable findings, it is important to specifically declare that these results are not generalizable less a reader try to use the data in an unintended way. The views of these participants reflect those of a small group of NBCTs in a single school district. Their answers do not suggest that all teachers, or even all master teachers, hold the same beliefs about student engagement.

Future Directions

This work helps inform several exciting and potentially generative avenues for future work on the study of engagement. Future studies may consider applying this same methodology and research questions to the elementary context. How do master teachers at the elementary level understand engagement, what are the sources of knowledge in that context, and how do those responses compare both to theory and the present work? This protocol could also be repeated through selection of teachers with a variety of sampling criteria. Such a study could, for example, examine how pre-service or novice teachers conceptualize engagement. Clustering the teachers

by specific subject area as opposed to expertise may also extend what is known about engagement and how practitioners understand engaged learning in content-specific ways.

Outside of the findings generated in this study, relatively little work has been done to examine where and how teachers learn about student engagement. Many of the master teachers in this work saw their understanding of engagement as an “evolution” or “journey.” Longitudinal work tracking teacher conceptualization of engagement over time could help understand how instructional beliefs about engagement change and mature through specific learning activities and years of classroom experience.

One of the distinguishing features of engagement study is the lack of consistency within various frameworks (Appleton et al., 2008; Boekaerts, 2016). This work treated expert practitioners as theorists of engagement in their own right, and it helped to elaborate upon specific sub-processes of engagement like cognitive and social engagement, and supported the hypothesized model of ABCS over other constructions. Through my experience with these teachers, I believe them to be valuable resources and partners in effective model-building for the construct. More in-depth qualitative work, in the form of interviews, observations, and even focus-groups could leverage the extensive resource that is expert knowledge in classroom teachers. A possible next step might be to present instructors with a specific framework of engagement and ask them for critique and feedback as a way to move closer towards a more unified and adoptable model of engaged learning.

Finally, the results of this study agree with those of Fredricks, Wang et al. (2016) and Wang et al. (2016); while the ABC framework appears to closely align with how teachers understand engagement, the model might better capture the construct through inclusion of social engagement as a fourth dimension. While it is unlikely scholars and theorists of engagement will

universally and immediately adopt an ABC+S construction of engagement, other works can use the four-dimensional model to inform surveys, observations, or classroom interventions.

Implications and Conclusions

When I began this work, I often wondered whether or not master teachers would offer any sort of consistency in their definitions and understanding of student engagement. I had no idea as to how these constructions would align to current theory, and while I could hypothesize possible sources for their knowledge, I had difficulty predicting any themes that would connect their answers. As I conclude this work, I am genuinely surprised at the level of detail and overall import master teachers apply to their knowledge student engagement. In addition, the answers of the teachers, while still varying from one another in many ways, shared much more in common than I had guessed. While commenting on the field, Azevedo alludes to the disjointed, messy, and confusing nature of engagement research as perhaps its single most defining characteristic (2015). Within this study, it took some time, effort, and contextual examples for master teachers to explain their definition of engagement, but their responses shared much in common with one another. If these ten expert teachers were to talk to each other about engagement, they would likely have more a common understanding and construction of the term than a group of educational psychologists.

I have come to believe through this process, that mastery of instructional skills in teaching and a deep understanding of student engagement have much to do with one another. Without direct exposure to literature, coaching, or guidance the expert teachers observed and interviewed in this study explained engagement in a way that is compatible to current theory. Specifically, the theory best encompassing the ideas of the group and most of the teachers as individuals was the ABC theory with an additional inclusion of the sub-process social

engagement; this inclusion is consistent with the most current work within engagement theory. Not a single teacher saw engagement as a unidimensional process, nor did one view engagement as an unimportant or unconsidered aspect of their practice. This work largely supports an ABC+S model for student engagement and such a framework will prove useful in future scholarship, teacher education, and clear definition of the construct.

While almost all teachers saw some aspect of social engagement as important, this work leaves the exact role and placement of social engagement in the overall framework unanswered. Is social engagement an individual sub-process as used in the Wang et al. (2016) survey, or does it encompass a process of engagement separate from and parallel to a three-dimensional individual engagement as seen in Jarvela et al. (2016) and explained by Eccles (2016)? For the research community, more inquiry and theorizing would need to occur to answer these questions. For the teachers in this study this distinction would likely matter little. They switched between discussions of engagement of an individual student and all students with great fluidity and frequency; this probably mirrors how they assess engagement in situ within the classroom. This work does support, however, the idea that master teachers see social engagement as an important piece to the overall framework of engagement. This process was so critical for teachers within this study that I do not think social processes should be engaged *within* affective, behavioral, and cognitive engagement—social engagement should stand separately within a model.

While relatively few studies have used qualitative interviews of teachers to help build theory on engagement, this work and that of Fredricks, Wang et al. (2016) have provided answers to questions plaguing the research community for decades. Engagement mattered a great deal to the participants within this study, and for scholars “engagement is one of the hottest research topics in the field of educational psychology” (Sinatra, Heddy & Lombardi, 2015, p. 1).

This work helped bridge the gap between two groups who have a great deal of knowledge about student engagement and much invested in achieving a clearer understanding of the construct.

Hopefully, these two stakeholders will interact more frequently.

The development of teacher understanding of engagement was much more procedural and in motion than I had originally believed. For these master teachers, it took time, energy, and a great deal of practice to become experts on student engagement. Much of their learning either occurred through independent practice, informal contact with peers, or targeted formal learning that required reflection and classroom application. In all three cases, teachers learned about engagement mostly on the job. This work shows that the NBCT process, in particular, was cited as an important source of knowledge of student engagement, not because it provided teachers with a specific framework, but because it made teachers think deeply and reflect upon practice.

Not a single teacher had learned a specific theory of engagement. While some believed student engagement has to be understood only through experience, there was no way to determine whether or not attempts at theoretical advocacy or formal training on engagement were more or less effective than a process of trial-and-error over the years. If this work provides one finding of value to the research community, I hope it is that scholars of engagement have done a poor job of theoretical advocacy and marketing. Perhaps this has been a good thing; it has taken some time to arrive upon solid models, but the time has come to make these theories known and accessible, so they can actually be used to help practitioners. Otherwise, why even bother with theory building and research? At the end of almost every interview, participants asked me if there *were* theories of engagement and if I could send them articles or graphics to help them better understand student engagement. I look forward to sharing this work and other studies with these teachers as I look forward to the day when engagement theories become

incorporated into ground-level educational practice. There is a need for clear and rich models of engagement in the world of teaching and learning, and fortunately the research community has frameworks suited to the task. The next step is to build an effective bridge between the two groups so that this information can be passed along.

There is one final point to be made when concluding this work. Student engagement matters. It is being referenced in schools every day. Teachers talk about student engagement in between questions about the weekend across the hallway. Colleagues ask peers to observe lessons and provide feedback based on how engaged the class is. Principals encourage their teachers to be more engaging in their instruction. Students are asked to complete surveys assessing how engaged they are in their classes. Districts seek to support engaged learning both for its own sake and in hopes to increase achievement and overall well-being of students. Educational psychologists conduct research and even create special issues of peer-reviewed journals devoted to the study of student engagement. How often though are these groups talking about the same thing? This work suggests that at least the understanding of master teachers aligns with that of theory, but the participants noted time and again that others in the practice often mean different things when talking about engagement. This disparity in understanding first means that anyone talking about student engagement should explain what exactly they mean when using the term. It also means that a prevailing model for engagement research—one that is easy to understand and communicate while also encapsulating as much detail about the complex and multidimensional process as possible—could provide real value across educational domains. A well communicated and clear model might even be more desirable than a perfect one. If this can happen, perhaps more teachers will be able to see student engagement with the same richness

as master teachers without the need to spend years and countless classroom hours developing and honing their understanding of student engagement.

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Appendix A

E-Mail to NBCTs

Sent by CAPS Department of Research and Planning to secondary NBCTs February 13, 2017
VCU Research Request

CAPS Research and Planning has approved the following study. You have been emailed because you fit the qualifications for the study. If you are interested, please contact the researcher listed below. Research is voluntary.

Dear Nationally Board Certified Teacher,

My name is Drew Baker and I am a graduate student at Virginia Commonwealth University, in the School of Education. I am conducting a research study with middle and high school teachers. I am contacting you to see if you are interested in participating with the study.

The subject of my research project is student engagement in secondary classrooms and its goal is to learn more about how master teachers conceptualize student engagement, and understand how teachers learn and talk about engaged learning. Teachers who participate will be a part of a scheduled, 45 minute classroom observation of “everyday teaching”. As the researcher I will conduct the observation personally, and will have no direct contact with students or teachers other than sitting in the classroom as observer. No audio or video recording will take place during this observation. Afterwards, I will conduct an interview with participants off-campus, after work hours, at a later date.

There are no known risks to you or your students for participating in this study, and through observation of the class we will gain a better knowledge of how teachers create and implement engaging instruction in the classroom. Not student data including grades, gender, or any information other than being “a student in Mr. Brown’s* class will be recorded by me as the researcher. This research is anonymous. Anonymous means that I will record no information about you that could identify you as an individual. All teacher names will be replaced with pseudonyms. I will also never record student names or identifying factors like gender, race, or seating position. The research team are the only parties that will be allowed to see the data. If a report of this study is published, or the results are presented at a professional conference, only group results will be stated, unless you have agreed otherwise.

If you have any questions about the research, you may contact me via e-mail at bakerad2@vcu.edu. If you have any questions about your rights as a research participant, you may contact the IRB Coordinator of Virginia Commonwealth University Institutional Review Board (IRB) by phone via e-mail at irbintake@vcu.edu.

If you are willing to participate in the study, please e-mail me directly. You can also feel free to e-mail me with any questions and without obligation to participate.

Sincerely,

Andrew D. Baker M.Ed.

Appendix B

Student Engagement Observation Rubric

	No Engagement- 0	%	Low Engagement- 1	%	Moderate Engagement- 2	%	High Engagement-3	%
Affective Engagement: <i>The students are emotionally connected to the learning.</i>	The majority students are displaying negative emotions in reaction to classroom instruction.		Students are not displaying evidence of positive emotional connection to classroom instruction.		Students are displaying <i>some</i> evidence of positive emotional connection to classroom instruction.		Students are displaying evidence of high positive emotional connection to classroom instruction.	
What it may look like:	<i>Students are angry or sad during the lesson, they are actively having negative experiences during an activity.</i>		<i>Students seem bored and disinterested. They are not really enjoying their time.</i>		<i>Students show some evidence of enjoyment or excitement. They appear to like the lesson.</i>		<i>Students are enthusiastic and/or happy during the lesson. They may be laughing, smiling, or look intent and focused.</i>	
Behavioral Engagement: <i>The students are doing what they are supposed to be doing.</i>	The majority of students are actively pursuing tasks unrelated to the designed instruction.		The majority of students are not participating in classwork or instructional tasks.		The majority of students are moderately involved through their classroom behaviors with the designed instructional tasks.		The majority of students are actively involved through their classroom behaviors in the designed instructional tasks.	
What it may look like:	<i>Students are working against the directions of the teacher. Their actions are in contradiction to the teacher's instructions.</i>		<i>Students are flying under the radar. They aren't really doing the work or much of anything else.</i>		<i>Students are following directions and actively participating.</i>		<i>Students show a high level of activity during the lesson, their actions contribute to the lesson in meaningful ways.</i>	
Cognitive Engagement <i>The students see the learning as valuable.</i>	No students are connecting instructional content to other domains or are monitoring or reflecting upon their own learning.		A few students are connecting instructional content to other domains and are monitoring or reflecting upon their own learning.		Some students are connecting instructional content to other domains and are monitoring or reflecting upon their own learning.		The majority of students are connecting instructional content to other domains and are monitoring or reflecting upon their own learning.	
What it may look like:	<i>Students do not see the task as meaningful at all. They may even see the learning activities as harmful to their future.</i>		<i>Students have no idea why they are learning what they are learning. They are passive partners in their own education.</i>		<i>Students show evidence of how they are connecting the ideas to their lives or the world around them. They seem to view the learning activities as important.</i>		<i>Students seem to really understand the "why" behind the activity based on their actions or responses. They are as invested in learning the content as the teacher is in teaching it.</i>	

Time	Activity (e.g. direct instruction, whole class discussion, small group work, independent practice)	Materials Used (e.g. worksheets, presentations, tablets, whiteboards)	Instructional actions/decisions aimed at engaging students (e.g. encouraging connection of ideas, explaining behavioral expectations, making jokes)	Additional Observations

Appendix C

Written Lesson Reflection

Questions will be presented and answered through a Google Form sent to teachers immediately after the observation.

Directions: Please answer each response in reference to the specific lesson I observed in your classroom. You may write as much or as little as you wish. Any insight you can provide as an NBCT may be valuable to the educational research community. Please complete this as soon as possible after the lesson is conducted. Thank you again for your help and participation. Please contact me via e-mail with any questions or concerns.

Reflective Prompts:

1. How do you think the lesson went?
2. Do you think students were engaged in your lesson?
3. How could you tell if students were engaged or not?
4. Did you take student engagement into consideration when you planned this lesson? If so, please explain.

Appendix D

Semi-Structured Interview Protocol

1. (CA) Tell me about your experience with teacher education/training?
 - a. Where did you go to school?
 - b. What degrees do you have?
 - c. How much staff development do you do?
2. (CA) Tell me about your experience in the profession.
 - a. Where have you worked?
 - b. What do you teach now?
3. (CA) Demographic Questionnaire (obtain any omitted data before proceeding to C1 and C2 stems).
 - a. Please identify for me how you would describe your:
(1) gender; (2) school (name, to be replaced with pseudonym); (3) grade levels taught; (4) subject area; (5) years of experience; (6) years teaching at current school; (7) educational experience (i.e. bachelors, masters degrees, post-masters degrees); and (8) ethnicity.
4. (C1) How would you define the term "student engagement"?
5. (C1) What factors let you know when students are engaged in your classroom?
6. (C1) What does a highly engaged classroom look like?

7. (C1) In the lesson I observed, do you think students were engaged? How do you know they were or were not engaged?
8. (C1) Do you think your colleagues view student engagement in the same way that you do?
 - a. Why might there be a difference?
 - b. Why might they say the same?
9. (C2) Where do you think you've learned about student engagement?
10. (C2) Tell me about an instance where you have heard a discussion about student engagement.
11. (C2) Do you hear the term "Student engagement" ever- through policy, school, colleagues etc? In what context do you hear it?

Appendix E

Pre-Set Code List adapted from
Fredricks, Wang, et al. (2016) and Wang et al., (2016)

Indicators of engagement from teacher and student
interviews.

Affective Engagement

- A1 Enjoyment/Fun/Cool
- A2 Excitement/Enthusiasm
- A3 Interest in Topic/Class
- A4 Like Topic/Class
- A5 Care/Value Learning
- A6 Value Good Grades/College
- A7 Relevant to Life
- A8 Want to Do It
- A9 Looks Forward to Class
- A10 Happy
- A11 Pride/Satisfaction
- A12 Comfortable
- A13 Confident
- A14 Feel Part of Group
- A15 Like Teacher/Working in Groups

Behavioral engagement

- B1 Involvement/Participation
- B2 Raising Hand/Asking Questions
- B3 Paying Attention/Listening
- B4 Focused/Concentrating
- B5 Effort/Trying Hard
- B6 Completing Homework
- B7 On-Task/Doing Work
- B8 Respectful/Following Directions
- B9 Doing Extra Work/Research
- B10 Interacting/Working with Peers
- B11 Interacting with Teacher
- B12 Speaking Out/Discussing Ideas

- B13 Sharing/Contributing/Explaining
- B14 Reviewing/Studying
- B15 Asking Teacher or Peers for Help
- B16 Active/Moving Around
- B17 Getting Good Grades/Doing Well
- B18 Attending School
- B19 Eye Contact

Cognitive Engagement

- C1 Thinking Hard
- C2 Applying/Connecting Ideas
- C3 Trying to Understand/Process Ideas
- C4 Taking Apart and Integrating Ideas
- C5 Persisting/Using New Strategies
- C6 Self-Reflective/Self-Monitoring
- C7 Trying to Understand Mistakes
- C8 Understand Different Perspectives
- C9 Using Strategies to Learn/Understand
- C10 Light Bulb Comes On
- C11 Solving Problems Different Ways
- C12 Teaching Self and Peers
- C13 Coming up With New Strategies on Own
- C14 Going In-Depth on Topic
- C15 Doing Extra Work/Finding Ways to Learn More

Appendix F

Final Codebook and Code Frequencies

C1 Codes- RQ1- How do master teachers conceptualize student engagement?		
Category	Code	Frequency
C1.1- Interest/Enjoyment	01- Enjoyment/Fun/Cool	8
C1.1- Interest/Enjoyment	02- Excitement/Enthusiasm	7
C1.1- Interest/Enjoyment	03- Interest in Topic/Class	28
C1.1- Interest/Enjoyment	04- Like Topic/Class	2
C1.1- Interest/Enjoyment	05-Care/Value Learning	5
C1.1- Interest/Enjoyment	06- Value Good Grades/College	6
C1.1- Interest/Enjoyment	08- Want to Do It	9
C1.1- Interest/Enjoyment	09- Looks Forward to Class	0
C1.1- Interest/Enjoyment	10- Happy	1
C1.1- Interest/Enjoyment	11- Pride/Satisfaction	0
C1.1- Interest/Enjoyment	12- Comfortable	2
C1.1- Interest/Enjoyment	13- Confident	4
C1.1- Interest/Enjoyment	14- Mad/Angry	1
C1.1- Interest/Enjoyment	15- Gross	2
C1.1- Interest/Enjoyment	16- Feel competitive	2
Total C1.1- Interest/Enjoyment		77
C1.2- Engaged Behaviors	01- Involvement/Participation	10
C1.2- Engaged Behaviors	02- Paying Attention/Listening	9
C1.2- Engaged Behaviors	03- Focused/Concentrating	1
C1.2- Engaged Behaviors	04- Effort/Trying Hard	1

C1.2- Engaged Behaviors	05- Completing Homework	2
C1.2- Engaged Behaviors	06- On-Task/Doing Work	25
C1.2- Engaged Behaviors	07- Respectful/Following Directions	2
C1.2- Engaged Behaviors	08- Doing Extra Work/Research	9
C1.2- Engaged Behaviors	09- Sharing/Contributing/Explaining	2
C1.2- Engaged Behaviors	10- Reviewing/Studying	0
C1.2- Engaged Behaviors	11- Active/Moving Around	1
C1.2- Engaged Behaviors	12- Getting Good Grades/Doing Well	1
C1.2- Engaged Behaviors	13- Attending School	0
C1.2- Engaged Behaviors	14- Eye Contact	6
C1.2- Engaged Behaviors	15- Body Language	8
Total C1.2- Engaged Behaviors		77
C1.3- Social Interactions	01- Raising Hand/Asking Questions	9
C1.3- Social Interactions	02- Interacting/Working with Peers	17
C1.3- Social Interactions	03- Speaking Out/Discussing Ideas	16
C1.3- Social Interactions	04- Asking Teacher or Peers for Help	1
C1.3- Social Interactions	05- Off-Topic Conversations	1
C1.3- Social Interaction	06- Teaching Peers	12
Total C1.3- Social Interactions		56
C1.4- Application/Relevance/RWC	01- Relevant to Life	15
C1.4- Application/Relevance/RWC	02- Applying/Connecting Ideas	16
C1.4- Application/Relevance/RWC	03- Work has meaning to the student	2
C1.4- C1.4- Application/Relevance/RWC	04- Real World Connections	13
Total C1.4- Application/Relevance/RWC		46
C1.5- Deep and Strategic Thinking	01- Trying to Understand/Process Ideas	5
C1.5- Deep and Strategic Thinking	02- Taking Apart and Integrating Ideas	3
C1.5- Deep and Strategic Thinking	03- Persisting/Using New Strategies	2
C1.5- Deep and Strategic Thinking	04- Self-Reflective/Self Monitoring	3
C1.5- Deep and Strategic Thinking	05- Trying to Understand Mistakes	4
C1.5- Deep and Strategic Thinking	06- Understand Different Perspectives	1

C1.5- Deep and Strategic Thinking	07- Using Strategies to Learn/Understand	4
C1.5- Deep and Strategic Thinking	08- Light Bulb Comes on	1
C1.5- Deep and Strategic Thinking	09- Solving Problems Different Ways	1
C1.5- Deep and Strategic Thinking	10- Coming Up With New Strategies on Own	0
C1.5- Deep and Strategic Thinking	11- Going In-Depth on Topic	2
C1.5- Deep and Strategic Thinking	12- Doing Extra Work/Finding More Ways to Learn	4
C1.5- Deep and Strategic Thinking	13- Take the assignment further	3
C1.5- Deep and Strategic Thinking	14- Asking for clarification—askin..	1
C1.5- Deep and Strategic Thinking	15- Students using resources	2
Total C1.5- Deep and Strategic Thinking		36
C1.6- Student-Teacher Rapport	1- Feel Part of Group	2
C1.6- Student-Teacher Rapport	2- Like Teacher/Working in Groups	7
C1.6- Student-Teacher Rapport	3- Interacting with Teacher	7
C1.6- Student-Teacher Rapport	4- Students are cared for by teacher	3
C1.6- Student-Teacher Rapport	5- "Connection" with teacher	11
C1.6- Student-Teacher Rapport	6- Student trust the teacher	5
Total C1.6- Student-Teacher Rapport		35
C1.7- Control over Learning Environment	1- Students in control of learning	3
Total C1.7- Control over Learning Environment		3
C2 Codes- RQ2- What are the sources of master teachers' understanding of student engagement?		
Category	Code	Frequency
C2.1- Experience	Experience	14
C2.1- Experience	Experience > Classroom Learning	2
C2.1- Experience	Experience in OTHER career	1
C2.1- Experience	Journey/ Evolved over time	1
C2.1- Experience	Reflection on Experience (what worked what didn't)	8
C2.1- Experience	Teaching engaging lessons is more fun	1
Total C2.1- Experience		27

2.2.1- Observing Peers	Observation (observing colleagues WITH post obs)	1
2.2.1- Observing Peers	Observation (observing colleagues)	5
2.2.2- Talking with Peers/Co-planning	Co-Planning	3
2.2.2- Talking with Peers/Co-planning	Colleague talks in the hallway	3
2.2.2- Talking with Peers/Co-planning	Colleagues/ Other NBCTs	1
2.2.2- Talking with Peers/Co-planning	Colleagues/Other Teachers	9
2.2.2- Talking with Peers/Co-planning	Conferences	1
Total C2.2- Peers/Colleagues		23
C2.3- NBCT	NBCT	11
Total C2.3- NBCT		11
C2.4.1- Admin	Administration	9
C2.4.2- Admin Observation Conferences	Observation (getting observed)	5
C2.4.2- Admin Observation Conferences	Observation (getting observed) post observation form/discussion	4
C2.4.3- Other Leaders	Mentor	2
C2.4.3- Other Leaders	Specialist	1
C2.4.3- Other Leaders	Resource Teacher	2
Total C2.4- Leaders		23
C2.5.1- Undergrad	College (undergrad)	3
C2.5.0- College *not as helpful	Taught engagement in college but not helpful compared to experience	2
C2.5.2- Grad School	College (grad school)	1
Total C2.5- Formal Professional Education		6
C2.6- Building Culture	Ford MS	2
C2.6- Building Culture	Staff Meetings	1
C2.6- Building Culture	Survey Data	1
6- Building Culture	Building Culture	2
Total C2.6- Building Culture		6
C2.7- PD (non-NBCT)	CAPS21	1
C2.7- PD (non-NBCT)	PLC	1
C2.7- PD (non-NBCT)	Staff/ Professional Development	2

Total C2.7- PD (non-NBCT)		4
C2.8- Independent Research	Research- online	1
C2.8- Independent Research	Research- reading	2
Total C2.8- Independent Research		3

Vita

Andrew Daniel Baker was born on June 24, 1985, in Richmond, Virginia, and is an American citizen. He graduated from Mills Godwin High School, in Richmond, Virginia in 2003. He received his Bachelor of Arts in History from Hampden-Sydney College in Hampden-Sydney, Virginia in 2007. He received a Master of Education in Educational Leadership from Virginia Commonwealth University in Richmond, Virginia in 2011. He has taught history and psychology at the high school level for seven years and has worked as an instructional technology resource teacher for the past two, all within the Henrico County Public School District. He received his National Board Certification in teaching Adolescent/Young Adult Social Studies in 2013.