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The Impact of Teacher Efficacy and Student Engagement on Eleventh-Grade South Carolina U.S. History and Constitution End-of-Course State Exam Scores

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Approval Page

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Abstract

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This research study analyzed the impact of teacher self-efficacy and student engagement on eleventh-grade South Carolina U.S. History and Constitution end-of-course state exam scores. Research questions centered on analyzing the relationships between the variables of teacher efficacy, student engagement, and student achievement as measured by the Teachers' Sense of Efficacy Scale, Van Amburgh Active Learning Inventory Tool, South Carolina U.S. History and the Constitution end-of-course exam scores, and U.S. History teacher interviews. This study found a positive correlation between student engagement and student achievement and a significant relationship between teacher efficacy and student achievement. The relationship of teacher self-efficacy and student engagement as measured by the Teachers' Sense of Efficacy Scale was not established.

The data collected in this study, along with teacher discussions, were collected, analyzed, and summarized in order to inform the practice of teachers, administrators, and district personnel in investigating pedagogical strategies to meet student learning needs and increase student achievement in social studies. In addition, this study aimed to add to the current body of knowledge in achievement gaps, teacher efficacy, student engagement, and student achievement.

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Chapter 1: Introduction

In a climate of high-stakes testing, pay for performance, and No Child Left Behind, standardized testing and the challenge of achieving adequate yearly progress (AYP) have created a climate of anxiety and fear within school systems for administrators, teachers, and students. In order to meet AYP, South Carolina's State Superintendent Mick Zais has created heated discussions over his pay for performance and transformational school model proposals. Zais's (2011) plan centered on educator accountability as a means to achieve an effective educational system for all students. Zais insisted that teacher compensation be transformed to include a "comprehensive evaluation system" which includes measurement of student growth; when applicable, student growth would determine a renewed contract or a dismissal slip for teachers and administrators.

Context of the Problem

District XYZ is a suburban school district located in the Piedmont region of South Carolina. It is located near a major metropolitan city and it serves 17,779 students. There are 17 elementary schools, five middle schools, three high schools, and one career/technology center. Student demographics include 37.9% African-American, 48.3% Caucasian, 7.2% Hispanic/Latino, 1.6% American Indian, 1.5% Asian, and 3.4% Other. The free and/or reduced lunch population equates to 55.6% (Researched District, 2014).

For South Carolina, student growth and AYP is measured through statewide testing in Grades 3-8 through the Palmetto Assessment of State Standards (PASS). Subjects assessed include English Language Arts, Mathematics, Science, and Social Studies; writing assessment occurs in Grades 5 and 8 only (South Carolina Department of

Education, 2015). Once students enter high school core courses, End-of-Course Examination Program (EOCEP) exams are given for certain subject areas by the state; courses include Algebra 1/Mathematics for the Technologies 2, Biology 1/Applied Biology 2, English 1, Physical Science, and U.S. History and the Constitution. The end-of-course (EOC) exams weigh 20% of a student's final averages in a class (South Carolina Department of Education, 2015). In addition, until the 2014-2015 school year, the High School Assessment Program (HSAP) test in English Language Arts and Mathematics determined student eligibility of a high school diploma. During the spring of 2015, two new tests were administered to determine college and career readiness—the ACT and WorkKeys (South Carolina Department of Education, 2015).

The U.S. History and the Constitution EOC exam began in 2009, and until recently, it failed to achieve growth. As shown in Table 1, only 2-3% of students managed "A" (93-100) scores until 2013-2014. While the percentage of students passing the exam has increased over the years, approximately one-third of students fail the exam with a score of 69 or below. Mean scores have increased slightly from 69.4 in 2008-2009 to 74.9 in 2013-2014.

Table 1

U.S. History and the Constitution EOCEP Student Average

Year	Number	Mean	%A	%B	%C	%D	%F
2008-2009	47621	69.4	2.0	5.1	14.6	20.8	57.6
2009-2010	48017	69.8	2.1	5.4	16.6	22.2	53.7
2010-2011	47724	71.0	2.9	8.2	16.9	21.6	50.3
2011-2012	47653	71.2	3.0	8.5	17.5	23.8	47.2
2012-2013	47558	72.7	3.0	10.3	21.0	26.3	39.4
2013-2014	47731	74.9	8.4	13.0	22.8	21.1	34.6

Note. South Carolina Department of Education (2014).

Table 1 illustrates the average scores for all districts in South Carolina. For instance, in District XYZ from 2009 to 2014, students scoring below passing decreased from 57.1% to 30.3 % in 2014; however, still approximately one-third of students fail the exam. This is represented in Table 2. The U.S. History EOC exam has the highest failure rate of all the other EOC tests in the state (English I, 19.9%; Biology/Applied Biology, 20%; Algebra I/Math Tech II, 12.3%) (South Carolina Department of Education, 2014).

Table 2

District XYZ Student Average U.S. History and the Constitution EOCEP

Year	Number	Mean	%A	%B	%C	%D	%F
2008-2009	1124	69.6	1.4	4.7	15.5	21.3	57.1
2009-2010	1229	69.9	1.0	4.6	18.9	22.8	52.8
2010-2011	1165	71.7	2.3	8.2	19.7	23.8	46
2011-2012	1188	71.0	1.8	6.6	19.1	25.9	46.5
2012-2013	1189	72.3	2.1	10.8	20.4	27.2	39.6
2013-2014	1180	75.6	7.3	15.8	26.2	20.4	30.3

Note. South Carolina Department of Education (2014).

Problem Statement

The problem this research sought to investigate is that until recent years, a gap existed between student performance on South Carolina Social Studies PASS tests in Grades 3-8 and students' later performance on the eleventh-grade U.S. History and Constitution exam. Approximately 70-80% of students within District XYZ were rated as achieving "Met/Exemplary" scores on PASS. Until 2013-2014, merely 60% of eleventh graders achieved a passing score on their EOC (South Carolina Department of Education, 2014). This drop of 10-20 percentage points in the achievement rate from eighth to eleventh grade has been a driving issue in this district. As of 2013-2014 testing years, a disparity existed between high schools attempting to increase their passing rates on the U.S. History and Constitution exam. In the past 2 years, High School C has reduced the failure rate by approximately 25%, whereas High School B has reduced it by approximately 10% and High School A by 14.6% (South Carolina Department of

Education, 2014). Table 3 illustrates this data.

Table 3

Schools A, B, and C Failure Percentages U.S. History and the Constitution EOCEP

Year	Number	Mean	HS A	HS B	HS C
2008-2009	1124	69.6	66.1	52.1	55.9
2009-2010	1229	69.9	56.0	46.9	56.0
2010-2011	1165	71.7	47.6	43.8	46.7
2011-2012	1188	71.0	51.0	43.3	46.4
2012-2013	1189	72.3	41.5	42.8	34.4
2013-2014	1180	75.6	37.5	34.0	21.2

Note. South Carolina Department of Education (2014).

Student achievement is not just a school, district, and state dilemma; it is a national problem as well. The 2010 National Assessment of Educational Progress (NAEP) U.S. History Assessment (based on national samples of public and nonpublic school students) revealed only 45% of students performed at or above the Basic level in general knowledge of U.S. History, meaning they can identify basic people, events, and ideas. On the other hand, 73% of fourth graders scored at or above the Basic level, and 69% of eighth graders scored at or above Basic (U.S. Department of Education, 2011). In sum, students in middle-level grades and below are rated as Basic or having competency in their knowledge of U.S. History, while less than half of high school students do the same.

The gap in performance between schools is crucial because according to Common Core, the goal of schooling in a democracy is to provide the skills necessary for young

people to become competent citizens; and in order to accomplish this, schools must "familiarize students with the history and culture that form the shared bonds of their national community" (Hess, 2008, p. 5). Similarly, the National Council for the Social Studies (2008) stated that a strong social studies curriculum is necessary to create a competent citizenry and maintain democratic traditions. High school students are young adults who will be responsible for creating, participating, and furthering our democratic future by age 18, yet half of these young adults are unaware of the basic foundations of the U.S. government based on local, state, and national tests.

The fear of incompetent citizenry is nothing new, and low performance for high school students' U.S. History tests has existed for the past 2 decades. In 1987, Ravitch and Finn criticized the performance of U.S. high school students' knowledge in history. Criticism continued with the release of NAEP scores in 1994 and 2002. Manzo (2002) condemned the NAEP results of high school seniors of failing to improve on the national U.S. History assessment. She wrote that experts rationalize the results of the scores due to a range of causes including poor licensure requirements for teachers and lack of classroom time spent on the subject due to pressures from other subject areas such as mathematics and language arts (Manzo, 2002). Gaudelli (2002) stated that one reason for the low scores stems from the fact that social studies is a fragmented content area in which many philosophies abound from Perennialism to Multiculturalism. Debates surround ideas about what and how to teach U.S. History; therefore, there has been no consensus among educators on how to solve this pedagogical dilemma (Gaudelli, 2002). Overall, as a result of the disputes, there is a deficiency in data remedying the issue.

One critical reported cause of student low performance is that student engagement in the social studies classroom is evidently lacking. Saye (2013) and the Social Studies

Inquiry Research Collaborative asserted that in order to develop college and career ready students who have strong civic competency, teachers should engage and challenge students with inquiry-based learning activities that provide students with a deeper understanding of historical issues and that are focused on student learning outcomes. This is aligned with the National Council for the Social Studies (2008) which advocated,

> A powerful and rigorous social studies curriculum provides strategies and activities that engage students with significant ideas, and encourages them to connect what they are learning to their prior knowledge and to current issues, to think critically and creatively about what they are learning, and to apply that learning to authentic situations. (p. 1)

Despite the advocacy for an engaging and challenging curriculum related to real-world issues, Saye (2013) stated that this rarely occurs in social studies classrooms today; part of the issue is a result of the pressure of state mandated tests which results in a narrowing of the curriculum and hesitancy for teachers to incorporate learning activities that promote inquiry-based learning activities in the classroom. Secondly, Saye claimed that students in classrooms with teachers who require higher order thinking skills and deeper levels of authentic inquiry activities tend to have higher levels of student achievement on standardized tests.

Hoffman, Steinberg, and Wolfe (2012) stated that student-centered learning, which is focused on how students learn and what engages them in learning, is key to closing achievement gaps and preparing students to be college and career ready. Toshalis and Nakkula (2012) added,

> Students will only engage in learning if they feel emotionally that they have a stake in the activity. . . . The more educators give their students choice, control,

> challenge, and opportunities to collaborate, the more motivation and engagement are likely to rise. (pp. 16-17)

This is critical for adolescents because they are exercising their new ability to think complexly and make decisions which thereby increases their desire for achievement.

Teacher efficacy is believed to play a central role in student achievement as well. According to Bandura (1993), perceived self-efficacy contributes to academic development through teacher beliefs in their personal efficacy to motivate and affect the learning environments that they create and through the level of academic achievement their students are able to reach. According to Tschannen-Moran, Woolfolk Hoy, and Hoy (1998), it is self-efficacy that affects outcome expectations and teaching competence. This thereby impacts the classroom environment and correspondingly impacts student engagement and achievement.

Purpose of the Study

The purpose of the study was to identify the impact of teacher efficacy and student engagement on eleventh-grade South Carolina U.S. History and Constitution EOC state exam scores. In the past 2 decades, research has shown that teacher involvement in creating student engagement is critical to student achievement and motivation, and those students who are more engaged tend to score higher on standardized tests (Skinner & Belmont, 1993; Saye, 2013). Similarly, teachers' emotional and behavioral actions in the classroom affect student engagement through the creation of structure, providing for student autonomy in learning activities, and allowing for student involvement by providing opportunities for students to form interpersonal connections (Skinner & Belmont, 1993). In addition, according to Bandura (1993), teacher beliefs in their ability to motivate and create learning opportunities (teacher

efficacy) affects the learning environments they create and therefore student achievement.

Significance

This study aimed to identify the impact of teacher efficacy and student engagement on eleventh-grade South Carolina U.S. History and Constitution EOC state exam scores and therefore to inform the practice of teachers, administrators, and district personnel in investigating pedagogical strategies to meet student learning needs in the content area of social studies. In addition, this study aimed to add to the current body of knowledge in achievement gaps, teacher efficacy, student engagement, and student achievement.

There is noteworthy research concerning teacher self-efficacy and its significance to the role of teacher and schools (Bandura, 1993; Gibson & Dembo, 1984; Tschannen-Moran et al., 1998; Tschannen-Moran & Hoy, 2001a). Student engagement continues to be viewed as multifaceted, and research illustrates it has a critical impact on student achievement (Appleton, Christenson, & Furlong, 2008; Dotterer & Lowe, 2011; Skinner & Belmont, 1993). Student achievement, historically, is a debatable topic for educators and policymakers alike (Hess, 2008; Ravitch & Finn, 1987). Each of these constructs interconnects and plays a critical role is student and school success.

Once knowledge is garnered on identifying the relationship and impact of teacher efficacy and student engagement in XYZ school district, student achievement will increase, thereby creating a more informed, competent citizenry.

Operational Definitions

The following terms were defined for the purpose of this study.

Teacher efficacy. The extent to which teachers believe they can affect student

learning.

Student engagement. Comprised of behavioral, emotional/psychological, and cognitive elements with each characteristic being influenced by the classroom teacher; also referred to as authentic engagement.

EOCEP. The South Carolina EOC Examination Program exams which are given by the state for certain high school core subject areas to measure student achievement and AYP; courses include Algebra 1/Mathematics for the Technologies 2, Biology 1/Applied Biology 2, English 1, Physical Science, and U.S. History and the Constitution.

Summary

Since No Child Left Behind, high-stakes state testing mandates permeate the school atmosphere with fear and anxiety. For South Carolina, in particular, testing begins for students in third grade, determines eligibility for high school diplomas, and decides if schools and districts meet AYP (South Carolina Department of Education, 2015). One area of trouble for District XYZ in its high schools is the South Carolina United States History and Constitution exam; a gap has existed in performance for eighth graders who scored approximately 70% "Met/Exemplary" on comparable content on the PASS exam to 60% of eleventh graders who were considered passing (South Carolina Department of Education, 2014). These scores are similar throughout districts in the state and on the NAEP exam for the nation. In addition, a disparity exists between high schools attempting to increase their passing rates on the U.S. History and Constitution exam in District XYZ (South Carolina Department of Education, 2014).

Recently, student engagement and student-centered learning activities that provide students with problem-based inquiry activities that are relevant to their lives have been found to be critical in influencing student achievement; unfortunately, strategies

such as these are often found lacking in most social studies classrooms. In addition, recent research on teacher efficacy has been found to be central in affecting student achievement. The purpose of the study was to identify the impact of teacher efficacy and student engagement on eleventh-grade South Carolina U.S. History and Constitution EOCEP exam scores in order to garner knowledge to improve student achievement rates.

Chapter 2: Literature Review

Introduction

This chapter presents a theoretical framework as well as a literature review in order to provide background on previous noteworthy research and current findings in the relationship between teacher self-efficacy, student engagement, and student achievement in the Social Studies. In addition, teacher self-efficacy is often a determinant student achievement (Ashton, 1984; Bandura, 1993; Dembo & Gibson, 1985). In the recent school climate of high-stakes, standardized testing, student engagement becomes critical to achieving student success. According to Skinner and Belmont (1993), those students possessing a higher level of student engagement make greater gains on standardized tests. Past and current literature connects the three variables of teacher self-efficacy, student engagement, and student achievement.

Theoretical Framework

This study sought to add to the current body of knowledge between the variables of teacher self-efficacy, student engagement, and student achievement particularly in an effort to investigate student performance on the eleventh-grade U.S. History and Constitution exam. Each variable has supporting constructs that contribute to the concept. Figure 1 illustrates the relationship among the variables.

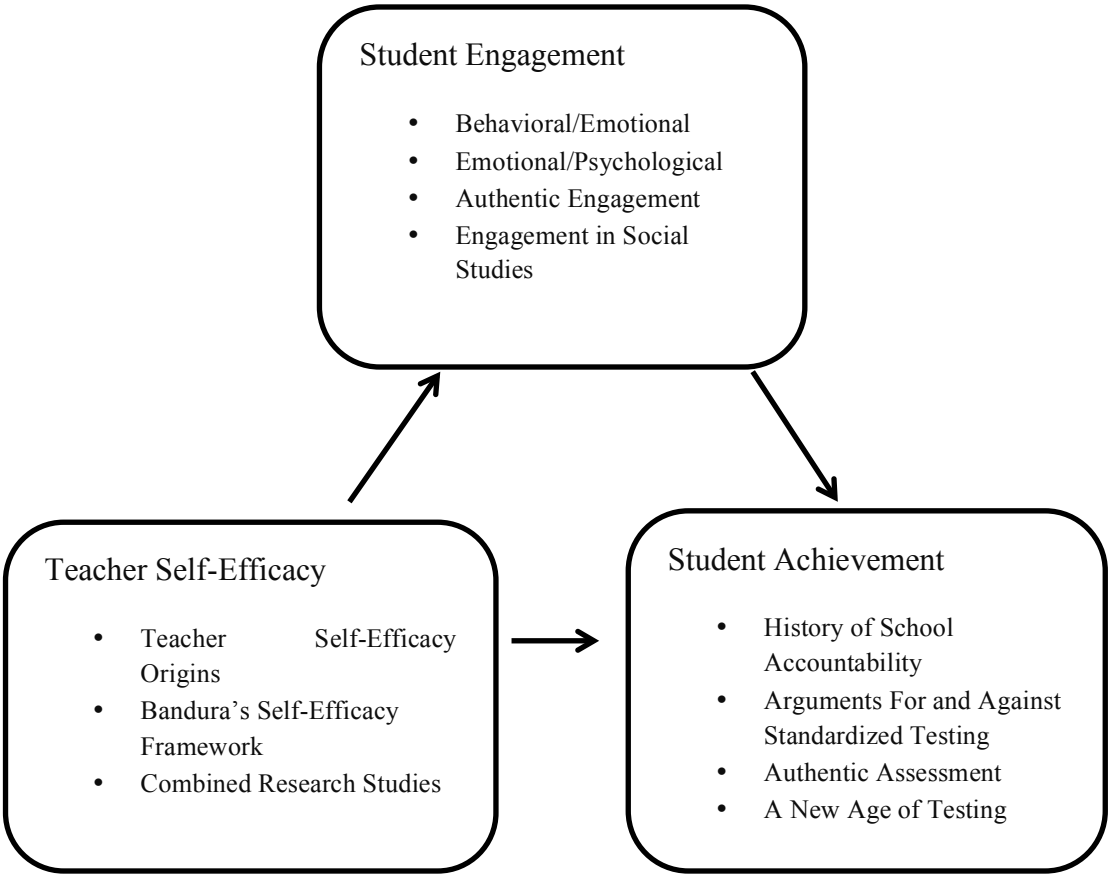

Figure 1. Theoretical Framework.

Figure 1 illustrates the supporting constructs for the three variables. The concept of teacher self-efficacy is first defined through its origins, followed by a discussion of Bandura's (1977, 1982, 1993, 1997) self-efficacy framework, and concluding with an explanation of combined research studies. Student engagement is divided according to four realms: behavioral and emotional engagement, emphasis on emotional/psychological engagement, authentic engagement, and student engagement in the Social Studies. Student achievement is outlined according to the historical context of school accountability and standardized testing, arguments for and against standardized high-stakes testing, followed by a call for authentic assessment, and description of research

concerning a new age of standardized testing. Each of these factors interconnects, and both student achievement and student engagement are impacted by teacher self-efficacy.

Literature Review

Teacher self-efficacy origins. Teacher efficacy is the extent to which teachers believe they can affect student learning (Ashton, 1984; Dembo & Gibson, 1985). According to Bandura (1993), teacher beliefs in their ability to motivate and create learning opportunities affect the learning environments they create and therefore student achievement.

Teacher efficacy was first introduced by RAND Corporation projects in 1976 and began as a "Change Agent Study" based on Rotter's (1966) social learning theory (McLaughlin & Marsh, 1978; Woolfolk & Hoy, 1990). Rotter's *locus of control* referred to the amount an individual believes he/she can control an outcome. Through the RAND study, it was found that teacher sense of efficacy (attitudes) regarding their professional aptitude have a major bearing on the outcomes of change-agent projects and their effectiveness (McLaughlin & Marsh, 1978). Although teacher efficacy was not directly studied, it was identified and subsequently determined based on the sum of Likert scale scores on two items: (1) "When it comes right down to it, a teacher really can't do much because most of a student's motivation and performance depends on his or her home environment" (Tschannen-Moran et al., 1998, p. 204); and (2) "If I really try hard, I can get through to even the most difficult or unmotivated students" (Tschannen-Moran et al., 1998, p. 204). In essence, the RAND questions marked a new beginning for the study of teacher efficacy in its relation to student achievement.

Subsequent studies spiraled out of the RAND Corporation study in attempts to pinpoint, build, and conceptualize the construct of teacher self-efficacy (Tschannen-

Moran et al., 1998). These studies included Rose and Medway (1981) with their measure titled Teacher Locus of Control; Guskey (1981) with a 30-item measurement called Responsibility for Student Achievement; and Ashton, Olejnik, Crocker, and McAuliffe (1982) with the Webb Efficacy Scale (Tschannen-Moran et al., 1998). These studies continued to base themselves theoretically on Rotter's (1966) Locus of Control theory.

Bandura's self-efficacy framework. A second realm of studies utilized the work of Bandura's (1977) social cognitive learning theory. Bandura (1982) stated, "Perceived self-efficacy is concerned with judgments of how well one can execute courses of action required to deal with prospective situations" (p. 122). Further, "self-efficacy judgments, whether accurate or faulty, influence choice of activities and environmental settings. People avoid activities that they believe exceed their coping capabilities, but they undertake and perform assuredly those that they judge themselves capable of managing" (Bandura, 1982, p. 123). In other words, one's belief about the level of ability in an action impacts the commencement of an action and the continued intensity of the performance of an action. In addition, past experience impacts self-efficacy, whereas higher self-efficacy is connected to those individuals who have experienced success in an action and lower self-efficacy is related to past failures (Bandura, 1977). "Those who judge themselves inefficacious . . . create stress and impair performance by diverting attention from how best to proceed with the undertaking to concerns over failings and mishaps" (Bandura, 1982, p. 123).

Bandura (1993) stated that perceived self-efficacy contributes to academic development through teacher beliefs in their personal efficacy to motivate and affect the learning environments that they create and through the level of academic achievement their students are able to reach. Bandura (1977, 1982, 1997) identified four sources of

self-efficacy information: mastery experiences (performance accomplishments), physiological and emotional arousal, vicarious experience, and social (verbal) persuasion. According to Tschannen-Moran et al. (1998), mastery experience combined with physiological arousal as a result of the experience is most critical to creating one's self-perception of teaching competence:

> Only in a situation of actual teaching can an individual assess the capabilities she or he brings to the task and experience the consequence of those capabilities. In situations of actual teaching, teachers gain information about how their strengths and weaknesses play out in managing, instructing, and evaluating a group of students. (p. 229)

Only successful teaching performances increase mastery expectations and therefore self-efficacy.

In addition, emotional or physiological arousal as an outcome of the teaching experience adds to self-perceptions of competence; the level of stimulation received can increase attention and energy to the task (Tschannen-Moran et al., 1998). Vicarious experiences such as observations of others teaching can impact self-efficacy through forming successful images, beliefs, and related capabilities; social (verbal) persuasion can provide positive feedback and thereby provide encouragement for continuation of the teaching task; or it can provide negative feedback and lower self-perceptions of teaching competence (Tschannen-Moran et al., 1998). Overall, it is the cognitive interpretation of each of the sources that combine to generate and influence teacher self-efficacy.

Tschannen-Moran et al. (1998) stated that all four sources of information influence self-perception of teaching competence, but it is the interpretation of the information that is critical to forming teaching efficacy. Tschannen-Moran et al. claimed

that the cognitive processing of the information determines how it will be evaluated and therefore how it will influence the analysis of the teaching task and the assessment of personal teaching competence. Tschannen-Moran et al. described teacher efficacy as being cyclical in nature (see Figure 2):

> The proficiency of a performance creates a new mastery experience, which provides new information that will be processed to shape future efficacy beliefs. Greater efficacy leads to greater effort and persistence, which leads to better performance, which in turn leads to greater efficacy. (pp. 233-234)

The reverse is true as well and can affect outcome. If one has low self-efficacy in regards to a performance or ability, this can cause one to be anxious, despondent, and futile about entering into a situation and therefore can create less successful performance outcomes (Bandura, 1982). According to Tschannen-Moran et al. (1998), it is the efficacy expectations that initiate and create outcome expectations.

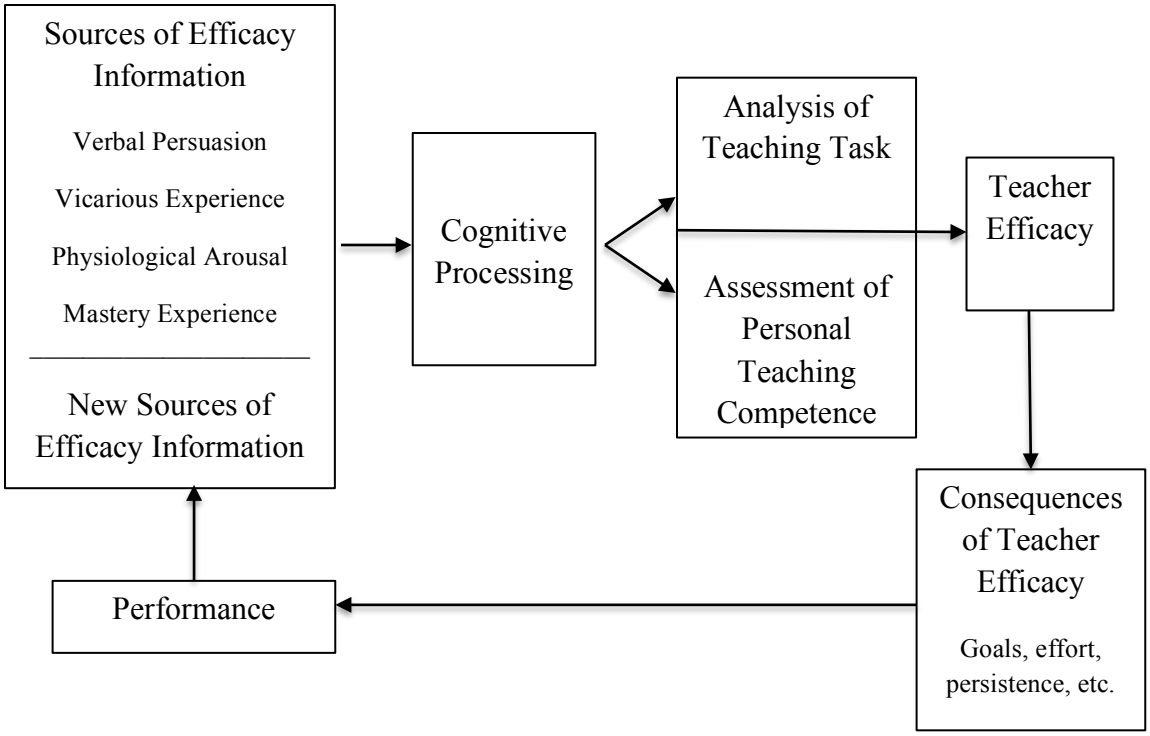

Figure 2. The cyclical nature of teacher efficacy (Tschannen-Moran et al., 1998, p. 228).

Combined research studies. A second realm of research studies developed based on Bandura's (1977) self-efficacy theory and included elements of the RAND study. These studies included the Ashton (1984) vignettes, Gibson and Dembo's (1984) Teacher Efficacy Scale (TES), and Tschannen-Moran and Hoy's (2001b) Teachers' Sense of Efficacy Scale (TSES).

Ashton, Buhr, and Crocker (1984) created two sets of vignettes that described situations a teacher might encounter. In relation to one set, teachers were asked to make decisions in their effectiveness in handling the situations based on a scale ranging from "extremely ineffective" to "extremely effective," and the second asked teachers to assess how they would rate their effectiveness as compared to other teachers (Ashton et al., 1984). The norm-referenced comparison vignettes significantly correlated with the

RAND items; however, the self-referenced effectiveness items did not (Ashton et al., 1984). According to Ashton et al. (1984), teachers evaluate their performance in comparison to other teachers; however, often they do not have direct information regarding the performance of other teachers. This information is often received based on student comments or stories in the teacher break room. According to Tschannen-Moran and Hoy (2001a), this measure was not widely accepted.

Gibson and Dembo (1984) created the TES, a measurement aimed at measuring teacher efficacy. The measure was constructed from the RAND study and incorporated elements of Bandura's (1977) theory to assess both outcome expectation (general teaching efficacy [GTE]) and personal teaching efficacy (PTE). According to Dembo and Gibson (1985), GTE represents the belief that "any teacher's ability to bring about change is limited by factors external to the teacher, such as home environment, family background, and parental influence" (p. 174). The second element, referred to as PTE, represents the "belief that she or he has the skills and abilities to bring about student learning" (Dembo & Gibson, 1985, p. 175). In a factor analysis of their study, Gibson and Dembo's (1984) RAND Item 1 corresponded to GTE and RAND Item 2 equated to PTE. Problems surrounded the Gibson and Dembo (1984) study, however, due to realized inconsistencies with items loading on both the GTE and PTE factor and another item not loading on either factor (Tschannen-Moran & Hoy, 2001a). According to Tschannen-Moran and Hoy (2001a), the lack of clarity between the two factors led to a call for newer, more reliable measurement.

Tschannen-Moran and Hoy (2001a) proposed a new measurement of teacher self-efficacy that combined a Likert-scale similar to the one in the Gibson and Dembo (1984) instrument and an extended scale based on Bandura's (1977, 1982, 1993, 1997) work in

their self-efficacy instrument called the OSTES (Ohio State Teacher Efficacy Scale) or TSES. Tschannen-Moran et al. (1998) advocated for a measure that is teaching task and context specific rather than simply general (GTE), reasoning that efficacious feelings arise and decline in certain subjects and settings. Tschannen-Moran et al. clarified,

> Two dimensions emerge in our model that are related to (but not identical with the two factors, GTE and PTE, often identified in teacher efficacy measures. In analyzing the *teaching task and its context*, the relative importance of factors make teaching difficult or act as constraints is weighed against an assessment of the resources available that facilitate learning. In assessing *self-perceptions of teaching competence*, the teacher judges personal capabilities such as skills, knowledge, strategies, or personality traits balanced against personal weaknesses or liabilities in this particular teaching context (e.g., My sense of humor is an asset with middle schoolers, but I wouldn't have the patience to teach young children). The interaction of these two components leads to judgments about self-efficacy for the teaching task at hand. (p. 228)

The new measurement was theoretically based on Tschannen-Moran et al.'s (1998) cyclical theory of self-efficacy (Figure 2), which was rooted in the sources offered by Bandura (1977), and it was designed to measure both PTE as a whole and efficacy toward the specific teaching tasks of instructional strategies, classroom management, and student engagement (Tschannen-Moran & Hoy, 2001a). The measurement included both a long form of 24 items and a short form of 12 items. Tschannen-Moran and Hoy (2001a) found both the long and short forms of the OSTES/TSES to be positively related to the RAND items and the PTE and the GTE factors of the adapted Gibson and Dembo TES (Tschannen-Moran & Hoy, 2001a).

Overall, questions regarding teacher efficacy still remain despite the growth in research. Klassen, Tze, Betts, and Gordon (2011) investigated teacher efficacy research from 1998-2009, and they stated that additional research is needed in four key areas to clarify teacher efficacy and its impact. They advocated for greater research in the sources of teacher efficacy, the formulation of instruments with greater validity that are future self-efficacy oriented (not current or past), additional research that connects teacher efficacy to student outcome, and investigations into how to implement self-efficacy research to the teaching practice (Klassen et al., 2011).

Student Engagement

The definition of student engagement has evolved over the last 20 years. Factors included in its description comprise behavioral, emotional/psychological, and cognitive realms with each characteristic being constructed by the classroom teacher. Past and current research leaves no doubt that student engagement is key to student achievement and that it is malleable and multifaceted (Appleton et al., 2008; Dotterer & Lowe, 2011; Skinner & Belmont, 1993).

Appleton et al. (2008) stated that understanding student engagement is critical to preventing school dropout and providing positive educational outcomes for all students. Willms, Friesen, and Milton (2009) found that only 37% of adolescents were intellectually engaged in language arts and math classes; and levels of participation, academic engagement, and intellectual engagement falls from middle school and remains low through secondary. As a result, they stated it is necessary to examine the constructs of student engagement in order to activate motivation and enhance student achievement (Newmann, Wehlage, & Lamborn, 1992).

Behavioral and emotional engagement. Skinner and Belmont (1993), in their

research on motivation in the classroom, stated that children engagement in learning is made up of both behavioral and emotional factors, and these dynamics are influenced by student perceptions of teacher behavior. Engaged children are behaviorally involved in classroom learning activities, and they exhibit a positive emotional tone in their work (Skinner & Belmont, 1993). Behavioral characteristics include children selecting learning tasks in which effort and concentration must be initiated; and positive tones comprise enthusiasm, optimism, and interest in activities (Skinner & Belmont, 1993). Engaged children often earn higher grades and score higher on standardized tests, but student intrinsic motivation decreases over school years and into adolescence; therefore, teachers must facilitate student engagement (Skinner & Belmont, 1993).

Vibert and Shields (2003) questioned the definition of engagement; in particular, engagement based on behavioral characteristics because "too often, simple compliance and involvement with, or completion of, an activity are regarded as synonymous with student engagement" (p. 226). Newmann et al. (1992) followed this assessment and stated that behavioral engagement could be misleading because students can be academically motivated to perform well without having a desire to truly succeed academically or master the material; engagement is explained as an unobservable activity because it includes an inner quality of an effort to learn. Teachers must surmise engagement through various indicators such as participation in academic work, intensity of concentration, enthusiasm expressed, and the degree of care shown in completing the learning assignments (Newmann et al., 1992).

Emphasis on emotional/psychological. Recent research has placed prominence on classroom climate as critical to student engagement and therefore student achievement. Dotterer and Lowe (2011) stated behavioral and psychological engagement

(affective and cognitive engagement combined) are critical to academic achievement, but it is the positive psychological climate overall that impacts engagement; effective educators should focus on creating a classroom environment that encompasses high-quality instruction and a positive emotional environment because when student psychological needs are met, they will be more engaged.

The *Students at the Center* series (Hoffman et al., 2012) added to the importance of creating an emotionally stable environment. Hoffman et al. (2012) called on neuroscience research and combined intellectual engagement along with social and emotional engagement to create an optimal learning environment centered on student engagement and student achievement. Hoffman et al. claimed that a student-centered learning approach is the key to creating student engagement and therefore student achievement especially in the 21st century; overall, it is based on relevance to the student and society, reflection utilizing meta-cognitive strategies, relationships among learners in a collaborative atmosphere, and reinforcement (or application of learned material). In the series, Hinton, Fischer, and Glennon (2012) stressed that the brain's prefrontal cortex, which regulates decision making and some emotional processing, is maturing during adolescence. In addition, emotion and learning have a symbiotic relationship in the brain; therefore, students are more likely to excel in a positive learning environment which nurtures relationships, provides a safe-zone from stresses, and encourages a sense of kinship in the classroom. In other words, the creation of a quality learning environment that is emotionally stable facilitates student engagement and therefore student achievement.

Li and Lerner (2013) explained that optimistic feelings towards school and motivation to learn deepens participation in learning activities, and the action of

participation plus optimistic feelings expands cognitive aptitude thereby enabling student achievement. Importantly, behavior and emotional engagement components do not alone account for engagement, because behavior merely indicates compliance and emotion solely accounts for students' "liking" of school; a cognitive component, which represents a student's commitment and values towards learning, is necessary to allow for true engagement (Li & Lerner, 2013):

> To maximize the schooling experiences of all youth, educators and practitioners need to devote effort to create nurturing and developmentally appropriate school environments so students are emotionally connected to school activities and personnel. Caring school environments in turn motivate students not only to try harder but also to commit to go further. Last, the present study also suggests that positive emotions and cognitive engagement are not enough and that participation is important well. (p. 31)

Therefore, based on current research, the most important constructs of engagement include a tripartite of behavioral, cognitive, and emotional factors of engagement.

Authentic engagement. Willms et al. (2009) followed the behavioral, cognitive, and emotional constructs of engagement by forming similar groupings. Willms et al. stated that adolescent student engagement should be student-focused so that the three forms of engagement connect together. Their research divided the constructs into social (a sense of belonging and participation in school life), academic (participation in the formal requirements of schooling), and intellectual (the emotional and cognitive connection to learning) segments. Despite the similar tripartite of student engagement components, Willms et al. based their argument on the work of Newmann et al. (1992) and Newmann and Wehlage (1993). They stressed that teachers design work to be

relevant and authentic for students by requiring work that utilizes student higher order thinking skills, includes disciplinary inquiry, makes real-world connections, is rigorous, and includes plentiful opportunities for students to collaborate and interact. These five components add to the cognitive engagement of students, provide for their social and emotional needs, and create opportunities for behavioral compliance.

Newmann et al. (1992) defined authentic student engagement based on three principles: (1) student need for competence; (2) student experience of school membership, such as their affective, cognitive, and behavioral relationship to the institution of schooling; and (3) the authenticity of the work, such as value beyond schooling, real-world connections, and opportunities for collaboration. These principles allow for students to fulfill their desire for competence and to create authentic work. Adding to this, Newmann, Marks, and Gamoran (1996) used constructivist qualities of student learning and defined authentic intellectual achievement and active learning to require (1) construction of knowledge, (2) disciplined inquiry, and (3) provide value beyond schooling. Behaviorally, active students can produce academic work that is intellectually superficial; therefore, authentic academic work must engage students and be created through using student prior knowledge to construct new knowledge, include opportunities for higher order thinking and in-depth understanding, incorporate for collaboration and conversation, apply to real-world or personal experience, and include the teacher as the facilitator of knowledge and provider of social and emotional support through the learning process (Newmann et al., 1996; Newmann & Wehlage, 1993).

Authentic pedagogy is supported by brain-based research by Hinton et al. (2012) and Toshalis and Nakkula (2012) who proposed that learning only occurs when experiences are active and not passive; they stated that student-centered learning

activities should be designed with the opportunity for students to connect their learning to their lives and goals. Toshalis and Nakkula advocated similar authentic pedagogy strategies by calling on teachers to incorporate opportunities for collaboration, student choice and control, and work that is challenging because adolescents are developing their identity and the ability for complex thinking so creating educational opportunities for students in which they express their opinions and shape their educational experiences fosters students' sense of purpose and engagement.

Engagement in social studies. Saye (2013) called for the use of authentic pedagogy in the social studies because their research revealed that higher levels of authentic instruction are associated with higher achievement levels on standardized tests. In addition, the use of authentic pedagogy in the social studies calls for teachers to engage students through the use of challenging inquiry which enables students develop their civic competency skills required in a democratic society.

Despite this, authentic pedagogy and inquiry-based activities rarely occur in classrooms today. Saye (2013) conducted a research study in which they looked at instruction, assessment tasks and student work (specifically higher order thinking skills), depth of knowledge, substantive conversation, and connectedness to the real world in the classroom for 52 teachers from 17 school sites in six states. The results showed that no teachers showed substantial levels of authentic pedagogy; 21% showed moderate levels of meaningful authentic pedagogy; and 64% showed minimal levels of authentic pedagogy (Saye, 2013).

Saye (2013) criticized state-mandated high-stakes testing for curtailing efforts to incorporate authentic engagement instruction in schools and believed that state assessments are commonly limited to lower-level content knowledge and encourage the

narrowing of the social studies curriculum rather than depth and breadth of content knowledge and active learning activities. Teachers and administrators are unlikely to adopt inquiry-based approaches for fear they will negatively impact student performance on the state tests (Newmann, Bryk, & Nagaoka, 2001; Saye, 2013).

Thornton (2001) held an additional criticism of state testing versus student engagement in the social studies. He contended that social studies content does not equal subject matter of school curriculum. For instance, teachers hold the responsibility of converting content into subject matter which is designed for a particular group of students, but standard makers/policymakers inhibit this by attempting to define social studies content through unified national standards implemented to define curriculum and subject matter for the purpose of creating an educated populace with the knowledge of the nation's history.

Thornton (2001) further illustrated that U.S. History standards are ensured by the development of high-stakes testing which obstructs teacher discretion of defining subject matter and inhibits their ability in tailoring to student needs and interests because the standards do not allow for topics such as community studies, current events, or student responsibilities. In addition, the quality of subject matter suffers because "social studies should not emphasize dispensing large amounts of information (a common criticism, of course) but should focus on big ideas, skills, and attitudes of interest and use in life for the ordinary person" (Thornton, 2001, p. 238). Gaudelli (2002) concurred and argued that there should be renewed efforts to differentiate the U.S. History curriculum so that it more accurately reflects the diverse student population within today's schools. He concluded, however, that this is hampered because a philosophical debate exists that challenges what U.S. History should be taught and how it should be taught; for example,

perennialist, essentialist, constructivist, and multiculturalist viewpoints compete with each other's interpretation of history and what is important for students to learn and understand; it is this conflict that could be one reason for the dismal passing rate on the NAEP History report (Guadelli, 2002).

Student Achievement

History of testing and accountability. The educational reform movement and the subsequent push for testing and school accountability reaches back to the publication of *A Nation at Risk: The Imperative for Educational Reform* when the National Commission on Excellence in Education (1983) alerted the nation that American society and schools lost sight of the true purposes of education and were failing to prepare students and to be competitive with other nations. At the time, the commission called for "Excellence in Education"; and to achieve the goal, reforms were needed to ensure high quality, equity, and rigor in education. It was not long after this report that Ravitch and Finn (1987) called for NAEP to test the basic knowledge of eleventh-grade students on history and literature; and following the results, added to the call improved efforts to educate the American youth.

Despite the order for excellence and increased rigor, by 1994 the movement toward the acquisition of basic skills had begun. In Hess's (2008) report, Cortese and Ravitch (2008) claimed that it was the demand of Congress regarding accountability of Title 1 legislation that began the lowering of standards to the mere acquisition of basic skills in reading and math. They claimed that this ignited the test-based accountability movement and that this was further cemented into place by President George W. Bush's No Child Left Behind Act of 2002 (Cortese & Ravitch, 2008).

The purpose of the No Child Left Behind Act (2001) was to ensure an equitable

education for all children by requiring schools to meet specific standards with highly qualified teachers and to close the achievement gap. Cortese and Ravitch (2008) argued, however, that while testing is important it is only one indicator of student progress and schools should not be evaluated and held accountable solely on test scores (Hess, 2008).

This accountability through testing began the era of "high-stakes" testing. According to Nichols, Glass, and Berliner (2012), high-stakes testing means "standardized tests developed specifically for the purpose of evaluating teachers and students . . . [which] may result in important consequences to schools, administrators, teachers, and students" (p. 3). If student performance on the test is low, this could result in the failure of a class or denial of a diploma, the termination of teachers and/or administrators, and ultimately the possibility of school closure (Nichols et al., 2012).

Arguments for and against standardized testing. Prior to federal accountability requirements, schools utilized achievement test scores to measure achievement levels such as the Iowa Tests of Basic Skills or the California Achievement Tests (Popham, 1999). These tests are still utilized today; however, a new host of standardized tests have been created by school districts and states to provide federal accountability.

In order to judge school effectiveness, many states created their own forms of standardized testing to cover K-12 accountability. In the elementary grade levels, standardized tests are created and implemented to cover basic skills such as reading comprehension and mathematical numbers and operations; for middle and high school level students, standardized tests measure achievement levels in particular curricular subjects and courses such as English/Language Arts, Algebra, and Biology (Thorndike & Thorndike-Christ, 2010).

According to Popham (1999), the purpose of a standardized test is to allow someone, "to make a valid inference about the knowledge and/or skills that a given student possesses in a particular content area" (p. 1). According to Sanders and Horn (1995), what makes standardized tests "standard" is through

> norming practices, machine scoring of multiple choice questions, precise instructions for administration, and standard formats for tests and recording of responses. The results can then be used to draw inferences about the state of cohorts or individuals as compared to an established standard. (p. 9)

What is exceptional about standardized tests, particularly nationalized achievement tests, is that they are norm-referenced, which means that one student's skills and knowledge will be compared against a national sample of students at the same age and grade level (Popham, 1999; Thorndike & Thorndike-Christ, 2010). Nationally normed tests are constructed to include content and curricula that are common to all districts and include only items that students are equitably to have learned; test blueprints are created, items are carefully reviewed for content, ambiguous or biased test items are removed, and item analyses are conducted (Thorndike & Thorndike-Christ, 2010). In addition, tests are reviewed for validity, reliability, and are openly critiqued by experts (Sanders & Horn, 1995). Lastly, test items are often constructed at the comprehension and application level of Bloom's taxonomy rather than the knowledge level since grade-level content is not always common across districts or states (Thorndike & Thorndike-Christ, 2010). According to Thorndike and Thorndike-Christ (2010), standardized achievement tests are useful for the following decisions: general selection of students (such as college entrance), diagnostic and remedial decisions, placement (such as grade level), curricular (such as selecting between programs), and public policy. However,

when making these decisions, Thorndike and Thorndike-Christ suggested utilizing additional information such as including data from locally produced tests and/or diagnostic tests to fully assess students. In particular, they stressed that daily instructional decisions and grading decisions should be based on locally created assessments (Thorndike & Thorndike-Christ, 2010).

For school/district accountability at the high school level, EOC test scores are utilized in evaluation of AYP under the No Child Left Behind Act as a subsection of their HSAP; and according to Domaleski (2011), "EOC tests refer to state required, standardized exams administered at or near the completion of a term of instruction" (p. 1). Most often, these tests are given in subject areas such as Math, Science, and English/Language Arts. EOC testing purposes include not only an accountability measurement for NCLB legislation but also to improve the teaching of content-based standards and to provide a more valid and reliable measure of student achievement of the standards (Domaleski, 2011). For student accountability, EOC test scores are often used to determine a student's course average by factoring the score into the course average or determine course credit; or some states use the score to determine graduation eligibility. More recently, as a result of the reauthorization of the Elementary and Secondary Education Act with a focus on College and Career Readiness, EOC tests are created to reflect established criteria of these skills and student achievement linked to them (Domaleski, 2011).

There is a great deal of research arguing against the use of high-stakes testing to determine school accountability. Newmann et al. (2001) stated that success in schools should not be determined by large-scale assessments because they measure only limited forms of student achievement, they fail to test much of what schools try to teach, and

when standardized they make it impossible for half the students to succeed. Noddings (2004) agreed and stated that there should be school accountability; however, there should not be high-stakes testing because students fear the exams, some teachers and schools increase student fear through warnings of the consequences of test failure, and teachers become demoralized over test results.

Nichols and Berliner (2005) argued that the negative repercussions tied to test pressure create corruption; some indictors include the future employability of teachers and administrators, bonus pay tied to performance, student promotions or nonpromotions, the reconstruction or disintegration of schools, and losses or gains in federal and state funding received by a school or school district. This, in turn, leads to problems such as student/teacher/administrator cheating, the exclusion of low-performing students, teaching to the test, a misrepresentation of data, the narrowing of the curriculum, the questioning proficiency, and declining teacher morale (Nichols & Berliner, 2005; Noddings, 2004). Recent corruption can be viewed by examples throughout the nation. In 2012, the Atlanta Journal-Constitution researched over 130 cases of test improprieties nationwide; cities that included high concentrations of questionable test scores included Mobile, Dallas, Houston, Detroit, Baltimore, and St. Louis. The paper found that most of the cases in these cities focused on individual teachers and individual schools within the districts; and in addition, the cheating cases resulted in a few firings of educators, to warnings, to the reassignment of administrators, and in rare cases a few criminal cases (Judd, 2012).

Arguments have been initiated for quality assessments as a result of high-stakes testing pressures, accountability, and corruption. The purpose of testing, according to Noddings (2004), is to allow us to think about what we are teaching and to improve

instruction to meet educational goals; and the problem is that it was not designed for individual diagnosis and it undermines critical thinking. Newmann et al. (1992) believed that the first step is to learn how to engage students and then create policies to enhance student achievement because ultimately learning rests in the hands of the student and one cannot expect gains in achievement until engagement is addressed. According to Newmann et al. (1992), the problem with testing concerns the following:

1. Failure to indicate what the student actually knows or can do.
2. Neglect of important educational goals such as creativity, interpersonal sensitivity, psychological development, civic responsibility, or critical thinking.
3. Perpetuation of cultural biases that unfairly restrict educational opportunity.
4. Providing information that has little relationship to success beyond school.
5. Failure to assess the specific curriculum taught within an individual high school. (p. 5)

Newmann et al. (2001) stated that despite the problems of conventional testing, the answer lies in the implementation of authentic intellectual work.

Authentic assessment. The recent emphasis for schools today is to focus on engaged learning, and this is best accomplished through authentic pedagogy and authentic intellectual work (Koh, Tan, & Ng, 2012; Newmann et al., 2001). Activities that emphasize higher order thinking skills and authentic assessment tasks feature knowledge construction, complex thinking, communication and collaboration, and problem solving within real-world contexts; skills that are needed for 21st century college and careers (Friedman, 2005; Koh et al., 2012; Newmann et al., 2001). This means that a move from conventional paper/pencil standardized tests to a more authentic assessment

of student achievement is needed (Friedman, 2005; Koh et al., 2012). However, not all support this move; for instance, school leaders have expressed concern that if teachers attempt authentic intellectual assignments that the emphasis on basic skills will be lost and disadvantaged students will suffer the fallout (Newmann et al., 2001). Based on a study funded by the Annenberg Foundation in the Chicago school system, Newmann et al. (2001) found that both high-achieving and low-achieving students benefitted from authentic intellectual assignments and gains were reflected on the Iowa Tests of Basic Skills and Illinois Goals Assessment Program tests. In addition, in a research study conducted by Saye (2013), instruction and learning assignments requiring higher order thinking skills were associated with higher student test performance.

A new age of testing. A new area of focus in standardized testing and state accountability has centered on measuring student growth. The Center for Public Education (2007) stated that the problem with the current accountability system is that EOC tests measure student achievement levels based on one test that is taken near the end of a class, and "schools are receiving credit for students who achieve a state's 'proficient' level regardless of how far they progressed to get there" (p. 1). The Center for Public Education referred to this one-time testing method as a Status Model. Many states and teachers highlight this argument, and they are beginning to call for a new growth measurement model for accountability because the status model does not take into account where a student started academically. This is particularly important in high-poverty urban and rural districts because many students in these schools start behind their peers, and the growth model would provide a stronger reflection of teacher and school effectiveness (Center for Public Education, 2007).

Many states have recently moved from the Status Model to the "Value Added"

and “Growth Models” to measure teacher proficiency, student achievement, and district accountability. According to the Center for Public Education (2007), a Growth Model is a system of academic measurement that calculates the amount of academic progress each student makes between two points in time such as the beginning of a year to the end of the year; a Value-Added Model is a type of Growth Model that is a method of assessing the degree in which teachers, schools, or education programs advance student performance by applying student growth. Each of the models utilizes student achievement levels based on standardized test scores. The Center for Public Education referred to achievement levels as instituted predetermined performance levels created to describe how well students have mastered the knowledge and skills as stated in content standards.

According to the Center for Public Education (2007), several factors are needed for a reliable and valid growth model. These items include a policy of intent statement showing which growth model is being used and for what purpose; properly designed tests that are aligned to state standards and measure yearly growth in a vertically aligned and scaled manner; data systems that effectively collect, store, and analyze the data; professional statisticians who can build an effective data collection and analysis system; professional development to train stakeholders to understand and utilize the data; effective communication to report the data to stakeholders in a clear and effective manner; and funding to support all the factors involved. There are many limitations to growth models. For instance, there are no “perfect” standardized tests and there are untested subjects for which there is no data. In addition, some students will have missing or incomplete data due to moving from district to district or state to state. Other uncontrollable variables are present that could affect accurate measurements such as

those not measured in value-added models—school climate, factors on the day of testing, and student characteristics (Center for Public Education, 2007; Domaleski, 2011). Last, and perhaps most importantly, growth in high schools is difficult to measure because content area tests in high schools are not annual and EOC tests are not vertically aligned or scaled to previous tests (Center for Public Education, 2007; Domaleski, 2011).

Recently, the North Carolina Department of Public Instruction (NCDPI, 2014) implemented a Value Added Growth Model to measure student growth and as a part of their measurement of educator effectiveness. Teacher effectiveness ratings are annually based on student growth data in particular courses. For schools, end-of-grade exams and EOC exams for Grades 3-8 in English/Language Arts and Mathematics; and Grades 5 and 8 in Science, Biology, Math I, and English II measure student growth. In addition, an analysis of student work, Career and Technical Assessments, and North Carolina Final Exams in non-EOC high school classes for English, Mathematics, Science, and Social Studies serve as a student achievement measure (NCDPI, 2014). Since there are no preassessments or previously administered tests to serve as a baseline for student growth in high school level courses, the North Carolina State Board of Education sanctioned Education Value-Added Assessment System (EVAAS) to determine student growth from past and current assessment results. According to NCDPI (2014), EVAAS predicts student scores on assessments based on past assessment data. The exact formula to measure student growth is not revealed by NCDPI.

Purpose Statement

The purpose of this study was to identify the impact of teacher self-efficacy and student engagement on eleventh-grade South Carolina U.S. History and Constitution EOC state exam scores.

Research Questions

1. What is the relationship between U.S. History teacher self-efficacy and student engagement as measured by Tschannen-Moran and Hoy's TSES (2001b)?
2. What is the relationship between teacher self-efficacy and student achievement on the South Carolina U.S. History and the Constitution exam?
3. What is the relationship between student engagement and student achievement for students on the South Carolina U.S. History and the Constitution exam?

Conclusion

This literature review provides exploratory research for each of the variables being analyzed in this study. For the first variable, there is noteworthy research concerning self-efficacy beginning with the RAND Corporation in 1976 followed by Bandura's (1977, 1982, 1993, 1997) work and moving forward in relating the significance of self-efficacy to schools and the role of teacher. The second variable, student engagement, continues to be viewed as a critical and evolutionary factor as knowledge about the role of emotion, cognitive processes, and authentic engagement become available with brain-based research and its impact on student achievement. The final variable, student achievement, has become a debatable topic for educators and policymakers alike. The initial beginning of student achievement and school accountability commenced in 1983 with *A Nation at Risk*, and it has had a residual effect through the decades as evidenced in the No Child Left Behind Act of 2002 and forward. Each of these constructs interconnects. This study aims to identify the impact of teacher self-efficacy and student engagement on eleventh-grade South Carolina U.S. History and Constitution EOC state exam scores.

Chapter 3: Methodology

Introduction

The purpose of the study was to analyze the relationship of teacher self-efficacy and student engagement to eleventh-grade South Carolina U.S. History and Constitution EOC state exam scores using a four-stage mixed-methods research design. Stage one consisted of a measurement of teacher self-efficacy using a teacher survey completed by Social Studies teachers followed by one-on-one interviews; stage two included observational data of student engagement; stage three comprised the aggregation of student achievement scores on the state EOC exam as reported by the district and state; and stage four consisted of follow-up interviews following the release of student achievement scores. This chapter describes the methodology of this study in selecting participants and instruments, as well as data collection and analysis.

Research Design

According to Creswell (2012), a correlational research design allows for the explanation of relationships among variables. This mixed-method research study aimed to examine the relationship among three variables: teacher self-efficacy, student engagement, and student achievement. Quantitative methods included the relationships among teacher self-efficacy, student engagement, and the student U.S. History EOC scores; qualitative methods included interviews and engagement observations. A comparison study examined the difference in the variables among schools, teachers, and student outcomes on U.S. History EOC achievement. The study took place over the course of the 2014-2015 school year. Each variable was quantified separately through a different system of measurement, and descriptive statistics were utilized to respond to the

research questions. The teacher participants in this study received scores for teacher self-efficacy, student engagement, and the mean for student achievement; and data analysis and interpretations of statistics defined the results.

Participants

Participants for this mixed-methods research study included current eleventh-grade U.S. History teachers (n=17) and eleventh-grade U.S. History students from all three high schools (n=1,200) in a district within the Piedmont region of South Carolina. The district is located near a major metropolitan city and serves over 17,500 students. There are 17 elementary schools, five middle schools, three high schools, and one career/technology center. Student demographics include 37.2% African-American, 49.6% White, 7.1% Hispanic/Latino, 1.6% American Indian, 1.6% Asian, and 2.8% Other. The free and/or reduced lunch population equates to 52.5% (Researched District, 2014). The participating schools were selected based on the fact that they are the sole three high schools in the district and that they have similar characteristics such as population numbers and demographics. At the end of data collection, teacher participants were given a $10 gift card to thank them for their participation in the study.

Instruments

Teacher self-efficacy was quantified through TSES, a cross-sectional survey design developed by Tschannen-Moran and Hoy (2001b). Creswell (2012) stated that surveys can help identify a population's opinions, characteristics, and beliefs; and researchers can statistically analyze the data retrieved to describe trends. The TSES was designed in order to measure the multifaceted nature of teacher efficacy in a more specific manner than the past general measurements of the construct; in particular, the goal was to measure both personal competence and a specific task-oriented analysis

(Tschannen-Moran & Hoy, 2001a). The survey was created using a Likert scale similar to the Gibson and Dembo (1985) instrument and expanded features from the Bandura scale (Tschannen-Moran & Hoy, 2001a). Additional items were added, revised, and tested through three studies in order to create the TSES (Tschannen-Moran & Hoy, 2001a).

The 24-item survey (long form) and the 12-item survey (short form) both use a 9-point Likert scale response ranging from 1=nothing, 3=very little, 5=some influence, 7=quite a bit, and 9=a great deal. Item questions fall into three subscale factors including efficacy for student engagement, efficacy for instructional strategies, and efficacy for classroom management. Each subscale score was calculated for each factor by computing the unweighted mean of the responses to the items for each factor with a final general efficacy score calculated from the mean of the three subscales. Tschannen-Moran and Hoy (2001a) determined the reliability for the 24-item (.94) and the 12-item scale (.90) in relation to total efficacy score for both the long and short forms. For subscales, reliabilities were .91 for instruction, .90 for management, and .87 for engagement on the long form; and .86 for instruction, .86 for management and .81 for engagement on the short form (Tschannen-Moran & Hoy, 2001a). Construct validity was established by assessing the correlation of the measure to the Rand and Gibson and Dembo instruments following Study 3 (Tschannen-Moran & Hoy, 2001a). Tschannen-Moran and Hoy (2001a) reported a positive relationship to both the Rand items ($r=0.18$ and 0.53, $p<0.01$) and to Gibson and Dembo's PTE factor ($r=0.64$, $p<0.01$) and the GTE factor ($r=0.16$, $p<0.01$). For this study, the 24-item measurement form was administered because the form is still fairly short in length; it did not take too much time for teachers to answer; and the validity score was higher for this measure than the short form.

Student engagement was quantified utilizing the Van Amburgh, Delvin, Kirwin, and Qualters (2007) Active Learning Inventory Tool. The purpose of the Active Learning Inventory Tool is to quantify active learning engagement in large class settings. It allows for student engagement to be analyzed quantitatively by type, quantity, length, and complexity of active learning. The tool categorizes learning activities as low, moderate, and high complexity levels. A trained, complete observer within the class utilized the Van Amburgh et al. tool. Creswell (2012) stated that an advantage of utilizing observation as a research method is that the researcher can record information as it happens. According to Van Amburgh et al., active learning occurs in a classroom when three components are included: (1) the *context* of the activity is explained, (2) students are *engaged*, and (3) a *reflection* closure activity occurs. The tool was created through researching articles and other materials on active learning as well as formative classroom assessment materials (Van Amburgh et al., 2007). The tool was reviewed by experts and subsequently modified during the validation process, and reliability was determined through a variety of observers with diverse experience levels using the tool with video-recorded lectures. Reliability was established at 88% agreement and increased with experience of utilizing the tool (Van Amburgh et al., 2007).

Student achievement was quantified through the use of South Carolina state data from the U.S. History EOC exam for the 2014-2015 school year. The tests were created to help fulfill the South Carolina Educational Accountability Act of 1998 (South Carolina Department of Education, 2009). These scores are used in Absolute Ratings and Growth Ratings for school performance on the South Carolina state school report cards. In addition, the exams are intended to promote student achievement and document student mastery of the standards (South Carolina Department of Education, 2009). The tests are

taken in May, they are weighted as 20% of students' final grades in the course, and they are officially reported each August of the following school year. Scores are based on a scale of 1 to 100 with A=93-100, B=85-92, C=77-84, D=70-76, and F=0-69 (South Carolina Department of Education, 2009).

According to the South Carolina Office of Assessment, the multiple choice test questions are created by a series of experts to ensure that each question is directly correlated to specific state standards, questions are reviewed by the South Carolina Sensitivity Review Committee, and each question is field tested to ensure validity (South Carolina Department of Education, 2009). According to the Operational Technical Report from the South Carolina Office of Assessment, reliabilities of raw test scores were established utilizing the Kuder-Richardson formulas 20 and 21 (KR-20 and KR-21). In Fall 2009, KR-20=0.842 and KR-21=0.827; in Spring 2010, KR-20-0.870 and KR-21=0.860; and in Summer 2010, KR-20=0.822 and KR-21=0.808 (South Carolina Department of Education, 2009). The Standard Error of Measurement was calculated utilizing the KR-20 reliability coefficient and figured to 3.489, 3.601, and 3.587, respectively. According to the technical report, test validity was evidenced through utilizing test content, item fairness, and internal structure (South Carolina Department of Education, 2009). Test items were developed based on the South Carolina curriculum standards; a content review committee and a sensitivity review committee analyzed items by content domain and for bias and differential item functioning; finally, internal structure was assessed using correlations among content domains (South Carolina Department of Education, 2009).

Teacher perceptions of teacher efficacy and student engagement were quantified through interviews with U.S. History teacher volunteers from each of the three schools

represented in this study. According to Creswell (2012), open-ended question interviews allow for participants in the study to voice their perspective without any constraints or being forced into an answer; in addition, the questions allow for the discovery of personal information and reflections that cannot be directly observed. The first round of interview questions followed the administration of the TSES. Questions included "To what extent do you feel you can motivate your students in U.S. History"; "To what extent do you feel you can get through to the most difficult students"; "How much can you do to help your students think critically and improve the understanding of a failing student"; "How much can you do to help students' value learning"; "To what extent can you differentiate your lessons to the proper level for individual students"; "To what extent do you feel you prepare your students for the United States History EOC exam"; and "Overall, what are your feelings in regards to the U.S. History EOC and its purpose?" A second round of interview questions occurred following the administration and retrieval of student exam results. Questions included "How do you feel your students performed on the U.S. History exam"; "How well do you feel you prepared them for the exam"; "What strategies did you use for your struggling students and your excelling students"; "In hindsight, do you feel there is anything you could have done differently this year or you plan to do next year"; and "What final comments do you have about the test or student preparation?"

Procedures

For the purpose of this study, correlational data were used to analyze the relationship between teacher self-efficacy and student engagement. The quantitative research utilized predetermined measurement and observation systems (as stated above in Instruments) in order to provide statistical data. Stage one consisted of a measurement of

teacher self-efficacy using the TSES, followed by one-on-one interviews with individual teachers; stage two included observational data of student engagement as measured by the Van Amburgh et al. (2007) tool; stage three centered on student achievement with the acquisition of student achievement scores on the U.S. History EOC as reported by state; and stage four consisted of follow-up interviews following the release of student achievement scores. All data were collected within 8 months of the 2014-2015 school year. Consent forms were provided (Appendix A); and no surveys, observations, or data collection occurred prior to IRB and proposal approval.

During stage one, U.S. History teachers were notified via email in September about the researcher's purpose and process of the study. A meeting of the researcher and the teachers was scheduled by October. At these meetings, the TSES was completed by teachers and the researcher explained in-depth the purpose of the study and answered any questions or concerns. The English/Social Studies curriculum coordinator for each school was present and served as proxy for the researcher in administering and retrieving the surveys. Each survey was letter and number coded to each teacher in order to identify teacher and school and to ensure anonymity to anyone except the proxy.

In addition, teacher perceptions of teacher efficacy and student engagement were qualified through interviews with U.S. History teacher volunteers from each of the three schools represented in this study. Interviews were requested following stage one's meeting in October and were scheduled at the participants' convenience. Participants were informed that the total interview time was no longer than an hour and that he or she would remain anonymous in the study.

Stage two followed stage one and included a series of student engagement observations of U.S. History and Constitution classes at all three high schools.

Observations utilized the Van Amburgh et al. (2007) tool and were conducted by trained English/Social Studies Curriculum Coordinators from each of the three high schools. Curriculum Coordinators were selected as the observer for this study because they are normally responsible for classroom observations of the teachers and their presence would be routine to students and teachers, therefore creating similar conditions to everyday classroom experiences. The researcher conducted training of Curriculum Coordinators regarding use of the tool in an arranged meeting following the TSES survey so as to establish inter-rater reliability. Three observations for each teacher and at all three schools were conducted; specifically, one in the fall prior to Winter Break, one prior to the end of February, and a third prior to mid-April. All observations were unannounced, and tallied results were sent by the established English/Social Studies Curriculum Coordinator (proxy) as each round of observations took place.

Stage three consisted of students taking the U.S. History and Constitution EOC exam in May as a result of the South Carolina Educational Accountability Act of 1998. The state designates a test date for all students during 1 particular day in May and then makeup tests for students who missed the original test are scheduled the week following the original test date. Schools receive the preliminary results within a week to 10 days of testing, and the scores count as 20% of the final grade for students in the course.

Stage four consisted of a second round of interview questions that took place following the administration and retrieval of student exam results. Questions were focused on teacher efficacy and student engagement and were developed based on the results of the survey and exams. Interviews took place at participants' convenience; the total time allotted to the interview was no longer than an hour; and participants remained anonymous.

Data Collection

Data collection for this study occurred in four stages. Stage one focused on teacher efficacy and teachers filling out the TSES, followed by volunteer teacher interviews; stage two focused on student engagement as measured by the Van Amburgh et al. (2007) tool; stage three focused on student achievement with the acquisition of student achievement scores on the EOC exam; and stage four focused on the second round of interviews. All data were collected within 8 months of the 2014-2015 school year.

During stage one, teachers completed the TSES at a meeting in October. Once complete, the proxy to the researcher collected them, coded them according to a letter/number combination, and placed them in a sealed envelope. The surveys were stored in a locked filing cabinet in the researcher's home until the data were analyzed utilizing IBM's Statistical Package for Social Sciences (SPSS). The SPSS data were password protected, and the surveys were destroyed at the conclusion of the study. In addition, during the round of interviews that followed the TSES survey, the researcher took notes of interviewees' responses to questions regarding teacher efficacy and student engagement. Notes were transcribed into a word processing program, and original notes were destroyed.

For stage two, which utilized the Van Amburgh et al. (2007) tool, three observations of each teacher were conducted and took place from October through mid-April. All observations were unannounced and lasted a total of 25 minutes. The trained proxy observers tabulated and ciphered the data, placed them in a sealed envelope, and then the data were handed to the researcher who input the data into SPSS. The observations were destroyed at the conclusion of this study.

For stage three, once English/Social Studies Curriculum Coordinators (proxies) received student U.S. History EOC scores in May, proxies aggregated teacher scores, removed student names, and coded the data for teacher anonymity. Once anonymity was ensured, the data were passed to the researcher who input the data into SPSS. A hard copy of the data was destroyed at the conclusion of the study.

Stage four began following the retrieval of student exam results in which the researcher developed questions based on the results of the TSES survey and exams. A second round of interviews was conducted with U.S. History teacher volunteers from each of the three schools represented in this study. Interviews took place at participants' convenience, the total time allotted to the interview was no longer than an hour, and participants remained anonymous. The researcher took notes during the interviews and input these notes into a word processing program to save. Notes were destroyed at the conclusion of the research study.

Data Analysis

All data, except interview notes, were entered into SPSS as they were collected; and the program was password protected with all originals destroyed. Electronic data were inspected for missing items and/or incorrectly keyed information. Descriptive statistics were utilized for all data.

The researcher began data analysis with teacher self-efficacy. An efficacy score for each of the three subscale factors including student engagement, instructional strategies, and classroom management was calculated using the unweighted mean as created by Tschannen-Moran and Hoy (2001a). Each of these subscales was correlated. Next, a sum of the three subscale scores was calculated to create a final teacher self-efficacy score; a cut-score was established to illustrate teacher efficacy or lack thereof.

Teacher scores were utilized for a correlational analysis with student engagement and U.S. History EOC scores. In addition, all teacher scores were combined as a teacher efficacy rating for each school, followed by a total combination score for a district teacher self-efficacy rating. Descriptive statistics were utilized to illustrate the findings.

Using the Van Amburgh et al. (2007) tool, the researcher quantified each engagement level of complexity with a range of point values with 1 representing low level, 2 representing a moderate level, and 3 as a high level of complexity. A mean score was calculated for each observation, followed by a mean score for each teacher utilizing the three observations. Each teacher's score was utilized for a correlational analysis with teacher self-efficacy and U.S. History EOC scores. All teacher student engagement scores were combined as a student engagement rating for each school and as a final district rating, followed by a correlational analysis to EOC scores. Descriptive statistics illustrate the findings.

Student achievement is the third variable, and it was established as a student's scale score on the South Carolina U.S. History and Constitution exam. A mean of student scores was calculated for each teacher, school, and the district. Then they were utilized for a correlation comparison of teachers, schools, and the district. Descriptive statistics illustrate the findings.

All notes from interviews conducted by the researcher were analyzed for themes and commonalities. Findings were compared to the results of teacher self-efficacy, student engagement, and student achievement scores. The results are provided in Chapter 4.

Finally, comparisons were created using the software SPSS. An Analysis of Variance was run to measure the differences between the schools' U.S. History EOC

mean scores with self-efficacy and levels of engagement. Comparisons were conducted to establish if there is a difference in mean scores between teachers who demonstrate self-efficacy and those who do not. In addition, low, middle, and high levels of engagement were examined for differences with the mean scores. Third, an analysis of interaction between levels of engagement and self-efficacy to mean scores was completed for each school and the district as a whole. Both illustrative data and narrative descriptions summarize findings for each of the three schools as well as the district.

Summary

The intent of this study was to analyze the relationship of teacher self-efficacy and student engagement to eleventh-grade South Carolina U.S. History and Constitution EOC state exam scores. The methodology described in this chapter planned for a 4-stage quantitative and qualitative design to measure teacher self-efficacy, student engagement, and student achievement. Once data were collected, the results of the research were described and illustrated in Chapter 4 of this dissertation.

Limitations

Known limitations to the research design included the small sample size of U.S. History teachers, and only one district was utilized in this study. Future research recommendations include gathering data from multiple districts in the state to increase participation and therefore validity and reliability of research.

Chapter 4: Results

Introduction

This study analyzed the relationship of teacher self-efficacy and student engagement to eleventh-grade South Carolina U.S. History and Constitution EOC state exam scores. Teacher self-efficacy was assessed using the TSES; student engagement was determined using the Active Learning Inventory Tool; and student achievement was determined using the U.S. History EOC exam scores. In addition, interviews were conducted with teachers following the administration of the efficacy tool and once again after the administration of the exam. This chapter presents the data and outcomes collected by these instruments during the study.

Teacher Efficacy

Teacher efficacy, as used in this study, is defined as the extent to which teachers believe they can affect student learning (Ashton, 1984; Dembo & Gibson, 1985). Teacher efficacy was measured utilizing the 24-item long form of the TSES.

Efficacy survey data were collected and analyzed from 13 of the 17 teachers in the three high schools. The goal of the study was to collect and include data from all 17 U.S. History teachers within the district; however, two teachers from High School A, one teacher from High School B, and one teacher from High School C were excluded due to teachers teaching new courses with students changing classes and teachers leaving the district.

Teacher efficacy was calculated based on teacher responses to 24 questions on teacher beliefs regarding student engagement, classroom management, and instructional strategies efficacy; eight questions numerically measured each construct in a Likert-scale response with 1 point equaling *Nothing* to 3 points *Very Little*, 4 points to 6 points being

Some Influence, and 7 points with *Quite a Bit* to 9 points as *A Great Deal*. The total raw score possible for each construct was 72 with a total efficacy raw score of 216; a raw score was then calculated for each construct and the total efficacy score was calculated as well. A raw score of 3 to 27 corresponded to low-efficacy, 28 to 54 moderate efficacy, and 55 to 72 high efficacy. A total score of 50% equates to low efficacy, up to 69% would be moderate, and a score of 70% or better equates to a strong sense of efficacy. Table 4 lists the raw score and total score percent for each construct of the TSES survey for each teacher, along with the school mean (the computed average for each teacher in the school) and district mean (the calculated average for each teacher in the district).

Table 4

Teacher Efficacy

	Engage RS / 72	Engage Score %	Manage RS / 72	Manage Score %	Instruct RS / 72	Instruct Score %	Total Efficacy RS / 216	Total Efficacy Score %
1	50	69.4	62	86.1	49	68.1	161	74.5
2	42	58.3	59	81.9	41	56.9	142	65.7
3	45	62.5	51	70.8	56	77.8	152	70.4
*HS A		63.4		79.6		67.6		*70.2
4	48	66.7	58	80.6	62	86.1	168	77.8
5	48	66.7	68	94.4	60	83.3	176	81.5
6	48	66.7	52	72.2	64	88.9	164	75.9
7	44	61.1	57	79.2	56	77.8	157	72.7
*HS B		65.3		81.6		84.0		*77.0
8	45	62.5	71	98.6	58	80.1	174	80.6
9	50	69.4	68	94.4	61	84.7	179	82.9
10	60	83.3	56	77.8	54	75.0	170	78.7
11	59	81.9	63	87.5	63	87.5	185	85.6
12	46	63.9	34	47.2	60	83.3	140	64.8
13	51	70.8	62	86.1	55	76.4	168	77.8
*HS C		72.0		81.9		81.2		*78.4
District		67.9		81.3		78.9		75.2

Note: *Total Score for High Schools A, B, and C.

From the data in Table 4, one can discern that each teacher and school has a moderate to high level of teaching efficacy overall with 64.8 being the lowest total

efficacy mean (Teacher 12—moderate) and 85.6 equating to the highest level of efficacy (Teacher 11—strong); both of these teachers are at School C. The highest engagement efficacy score rated 83.3 (Teacher 10), and the lowest score of this construct was 58.3 (Teacher 2). For management efficacy, School C included both the strongest and weakest efficacy scores with Teacher 8 at 98.6 and Teacher 12 at 47.2. For instructional efficacy, 56.9 was the lowest score (Teacher 2) and 88.9 was the strongest score (Teacher 6). Overall, High School C netted the highest level of efficacy at 78.4; High School A computed the lowest sense of efficacy at 70.2; however, despite being the lowest of the three schools, High School A's level of efficacy is still considered to be strong.

Together, teaching efficacy in the district rated at a strong level with a mean score of 75.2; engagement efficacy rated 67.9 (moderate); instructional efficacy rated at 78.9 (strong); and management rated the highest construct at 81.3 (strong). For all three schools, engagement efficacy scored the lowest of the three constructs (School A, 62.5; School B, 65.3; and School C, 72.0) when compared to management (School A, 79.6; School B, 81.6; and School C, 81.9) and instruction efficacy (School A, 67.6; School B, 84.0; and School C, 81.2). Management efficacy rated the strongest of the three constructs at all schools, with the exception of High School B (Management, 81.6) where Instruction efficacy scored the highest (Instruction, 84.0).

Interviews with U.S. History teachers from each of the three schools represented in this study were conducted in October after the TSES survey and once again in May after the EOC exam. According to Creswell (2012), open-ended question interviews allow for participants in the study to voice their perspective without any constraints or being forced into an answer; in addition, the questions allow for the discovery of information that cannot be directly observed. Eight of the 13 teachers chose to voice

their perspective in the fall and 11 teachers participated in the spring.

During the interviews, teachers elicited a strong sense of efficacy in that they expressed that they are able to motivate a majority of students to "perform well." Teachers stated that they are able to do so through getting to know the students on a personal level and forming connections with them. In reference to reaching and motivating the most challenging students, teachers stated that outside factors are sometimes out of their control, such as a previous experience with the subject, home environment and parents, and social influences. As one teacher commented, "By their Junior year [when students enroll in U.S. History] it is incredibly difficult to change their perspective on school and learning." Despite outside factors, all teachers expressed that they had the ability to do something in the classroom to motivate students, and even the most difficult students can be reached through making special efforts to form personal relationships with them.

Student Engagement

Student engagement, as defined in this study, is comprised of behavioral, emotional/psychological, and cognitive elements with each characteristic being influenced by the classroom teacher; it is malleable and multifaceted, and research indicates that engagement is key to student achievement (Appleton et al., 2008; Dotterer & Lowe, 2011; Skinner & Belmont, 1993). The Van Amburgh et al. (2007) Active Learning Tool was utilized in this study to measure student engagement. Program coordinators at each high school utilized the tool in three 20-25 minute observations. Levels of questioning, along with learning activities, were noted and then categorized according to low, moderate, and high levels of complexity. Points were allotted based on the level of activity utilized; low-level learning activities received 1 point, moderate-level

received 2 points, and high-level activities earned 3 points. Due to multiple activities implemented in some classrooms over the course of the observation, levels of learning activities were averaged to receive a mean observation score. After three observations, the mean of the total observations was calculated to represent the average level of learning complexity conducted in the classroom. Table 5 lists the mean level of engagement for each teacher and observation.

Table 5 clearly demonstrates that the learning activities conducted in a majority of the classrooms were of a low-level complexity (1); activities included lecture and question and answer; although there was an occurrence of the use of a computer-based interaction system and a few application activities, these were still considered low-complexity level learning opportunities according to the Van Amburgh et al. (2007) Active Learning Tool.

Table 5

Level of Engagement

Teacher	O1 Fall	O2 Winter	O3 Spring	Observation Mean
1	1	1	1	1
2	1	1	1	1
3	2	2	1.5	1.83
*HS A				*1.28
4	1.3	3	1	1.77
5	1	2	1	1.33
6	1	1	1	1
7	1	1	1	1
*HS B				*1.28
8	1	1	1.6	1.2
9	1.3	1	1	1.11
10	1	2	1	1.33
11	1	1	1	1
12	1	1	1	1
13	1.3	1	1.5	1.27
*HS C				*1.15
District				1.22

Note: *Total mean for High School A, B, and C.

There were a few exceptions to the low scoring observed activities. Teachers 4, 9, and 13 used a combination of activities, which resulted in a higher score of 1.3 during the fall observation round. The winter observation round was stronger than the fall with three instances of moderate-level activities by Teachers 3, 5, and 10 (one in each high school) and a high engagement score (3) with Teacher 4. Spring-level observations regressed to lower complexity with only three teachers earning combination level scores; Teacher 3 scored 1.5, Teacher 8 earned 1.6, and Teacher 13 rated 1.5.

Most activities observed rated as low-level complexity. Six teachers earned only low-level complexity for all three observations throughout the year: Teachers 1, 2, 6, 7, 11, and 12. Teacher 3 at High School A and Teacher 4 at High School B rated the

highest in learning complexity with a score of 1.83 and 1.77, respectively. These two teachers conducted more moderate-level activities such as small group presentations and discussions, concept maps, and role playing. Overall, only one observation of 39 total included a high-complexity level activity, and this was a cooperative learning based activity by Teacher 4 at High School B. In all, High School C was the lowest of the three schools with a mean of 1.15; both Schools B and C earned an observation mean score of 1.28. The district as a whole received a low-level score of 1.22.

The data collected from classroom observations and presented in Table 5 correspond with concerns expressed by teachers in the interviews. Teachers stated that despite the knowledge and ability to create differentiated and higher engagement activities, they were inhibited to do so due to the difficulty and pressure of implementing lessons that are centered on fixed standards in classrooms with over 30 students who all have multiple learning levels and needs. Further data concerning engagement efficacy and observed engagement in the classroom are stated below.

Engagement Efficacy and Observed Engagement

Table 6 illustrates the results of teacher engagement efficacy compared to observed engagement over the course the school year. Only two teachers' sense of engagement efficacy and engagement observation scores matched; Teacher 3 rated 62.5 (moderate) for engagement efficacy and 1.83 (moderate) for engagement activity. Teacher 4 was similar with an engagement efficacy score of 66.7 and an observation score of 1.77. Notably, both of these teachers scored the highest in engagement activity of all 13 teachers.

Six teachers scored only a low-level 1 rating for engagement observation, and each of these teachers illustrated a gap between their efficacy of engagement (which rated

moderate to strong) and the observed level of engagement activity conducted (low). Teachers 1, 2, 5, 6, 7, 8, 9, and 12 scored moderate on engagement efficacy but low in engagement activity level. Teachers 5, 8, and 9 of this group scored above a level 1 for engagement, but the average fell below the moderate engagement level. As a result of the gap, both High Schools A and B earned a mean efficacy engagement score of moderate to an engagement score of low (A, 63.4 to 1.28; B, 65.3 to 1.28).

Table 6

Efficacy Engagement compared to Observation Engagement Activities

Teacher	Efficacy Engagement Score (%)	Efficacy Engagement Level	Engagement Observation Mean	Engagement Activity Level
1	69.4	Moderate	1	Low
2	58.3	Moderate	1	Low
3	62.5	Moderate	1.83	Moderate
*HS A	*63.4	*Moderate	*1.28	*Low
4	66.7	Moderate	1.77	Moderate
5	66.7	Moderate	1.33	Low
6	66.7	Moderate	1	Low
7	61.1	Moderate	1	Low
*HS B	*65.3	*Moderate	*1.28	*Low
8	62.5	Moderate	1.2	Low
9	69.4	Moderate	1.11	Low
10	83.3	Strong	1.33	Low
11	81.9	Strong	1	Low
12	63.9	Moderate	1	Low
13	70.8	Strong	1.27	Low
*HS C	*72	Strong	*1.15	*Low
District	67.9	Moderate	1.22	Low

Note: A total efficacy score of 50% equates to low efficacy, up to 69% would be moderate, and a score of 70% or better equates to a strong sense of efficacy. Engagement Observation mean scores equal 1 (low), 2 (moderate), and 3 (high) levels of engagement activities. Teachers 3 and 4 are the only two whose engagement efficacy matches the level of observed engagement (moderate).

Teachers at High School C showed the greatest discrepancy between engagement efficacy and observed engagement scores in that Teachers 10 (83.3 to 1.33), 11 (81.9 to 1), and 13 (70.8 to 1. 27) rated strong in engagement efficacy but averaged low in engagement activities. This resulted in High School C having the greatest gap rating 72

(strong) in engagement efficacy and 1.22 in engagement activities (low). In all, the district showed a gap with an engagement efficacy mean score of 67.9 (moderate) to engagement activity mean score of 1.22 (low).

A Pearson Chi-Square test for association was conducted to see if teacher efficacy of engagement and observed engagement are associated. Table 7 illustrates the cross-tabulation results.

Table 7

*Engagement Efficacy Level * Engagement Activity Average Cross Tabulation*

		Engagement Observation Average		
		1.00	2.00	Total
Engagement Efficacy Level	2.00	429	98	527
	3.00	121	0	121
Total		550	98	648

The gap between engagement efficacy and engagement observed is further exemplified by the cross-tabulation results. Table 7 illustrates that as efficacy increases from a moderate level 2.0 (429) to a strong level 3.0 (121), the average engagement numbers decrease. In addition, an engagement efficacy level of 3.0 (strong) showed zero moderate engagement observations. Table 8 illustrates the association results from the Pearson Chi-Square test.

Table 8

Results of Chi-Square Test (X^2)

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	26.510[a]	1	.000		
Continuity Correction[b]	25.081	1	.000		
Likelihood Ratio	44.353	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	26.469	1	.000		
N of Valid Cases	648				

Note. (a) 0 cells (0.0%) have expected count less than 5. The minimum expected count is 18.30; (b) computed only for a 2x2 table.

A Pearson Chi-Square test for association was conducted between engagement efficacy and engagement activities observed as illustrated in Table 8 above. All expected cell frequencies were greater than five. There was a statistically significant association between engagement efficacy and engagement activities observed, $X^2(1) = 26.510, p < .001$.

During the interviews, all eight teachers stated that they have the ability to help their students improve understanding through creating engaging activities that meet individual learning needs; and they expressed a desire to create student choice activities, collaborative projects, and thematic units that would differentiate the learning environment and increase engagement. However, despite the ability and desire, the teachers expressed a common concern centered on the relevancy of the curriculum combined with the pressure of performance on the state test that they claimed inhibits their ability to implement higher level engagement activities.

Teachers expressed that students are disengaged with the curriculum because they do not see a relevance to the current U.S. History standards because they do not include

enough multicultural content in the standards to engage the diverse composition of the classroom; e.g., African-American history, women's history. In addition, it was stated that pressure to focus on "covering" the standards restricts teachers' ability to incorporate more multicultural content, student choice, projects, research, and other differentiated activities that would increase engagement due to pressures of performance on the EOC exam because they do not have enough instructional time to cover standards and to create activities or learning opportunities which would delve students in-depth into the content. It was stated that test preparation results in disengagement as well. Teachers stated that they must combat "burn out" issues and apathy with students because they are weary of test preparation by the end of the year.

Overall, teachers interviewed expressed that they can help students value learning and that they can implement differentiated methods to engage the students. However, they stated that they are limited in doing so because of pressure to adhere to limited standards and the burden of standardized test performance. This correlates to the high level of efficacy data collected from the TSES but lack of engagement activities collected from the observation data.

Student Achievement

Student scale scores on the South Carolina U.S. History and Constitution EOC Exam measured student achievement. The exam was created to help fulfill the South Carolina Educational Accountability Act of 1998 (South Carolina Department of Education, 2009). These scores are used in Absolute Ratings and Growth Ratings for school performance on the South Carolina state school report cards. In addition, the exams are intended to promote student achievement and document student mastery of the standards (South Carolina Department of Education, 2009). A mean of student scores

was calculated for each teacher; scores were weighted according to the number of students per teacher. Means for school, as well as for the district, were calculated as well. Table 9 illustrates the achievement data.

The data in Table 9 include mean scores for each U.S. History teacher along with a mean for each school and a final mean for the district achieved on the South Carolina U.S. History EOC exam in May 2015. Scores utilized in this study only include college preparatory students who were enrolled in a teacher's class year-long and do not include scores of students who transferred to a different teacher, transferred schools, or enrolled mid-year. Advanced Placement and International Baccalaureate students' scores were removed as well. Scores were weighted to account for the number of students for each teacher.

Table 9

Student Achievement

Teacher	Number of Students	EOC Mean	School Mean	District Mean
1	48	70.67	HS A	
2	49	71.82	72.86	
3	45	76.09		
4	53	77.53		
5	49	72.37	HS B	
*6	54	79.50	75.21	74.82
7	67	71.46		
8	48	75.02		
9	45	76.58		
10	51	77.16	HS C	
11	21	75.14	75.53	
12	48	71.88		
13	49	77.41		

Note. Student scores include only those students who remained in the classroom yearlong, and do not include students who changed teachers or entered the classroom mid-year, and scores do not include Advanced Placement or International Baccalaureate students who took the exam.
*An inclusion teacher was in the classroom with Teacher 6.

The data illustrated in Table 9 clearly reveal that High School C still has the highest score mean at 75.53, however, the achievement gap has closed to merely a slim margin with High School B at 75.21 and High School A at 72.85. Also, of note is that Teacher 6, who had a Special Education Inclusion teacher in the classroom as an aide, had the highest mean score of 79.5.

Interviews conducted following the exam exhibited common themes with High School A and High School B. When discussing EOC exam preparation, teachers stated that they felt they prepare the students well; however, a common complaint centered on the lack of feedback after the exam. One teacher elaborated,

> It is frustrating that the state is in control of a test we are all required to give yet we do not receive any feedback whatsoever on our students' scores. We have no idea what questions or topics they struggled with. Therefore, it is impossible for us to correct those issues.

In all, teachers claimed that any feedback provided would allow teachers to analyze and refine their practice for future instructional years.

While teachers at both schools agreed that differentiation is difficult with large classrooms and the pressures of standardized testing, both Schools A and B claimed they created learning groups for differentiated learning assignments. Teachers created lessons focused on increasing literacy skills in primary source analysis by forming groups based on reading levels then creating assignments and activities modified for those students. In addition, teachers at School A stated that they focus time on reteaching and reassessing struggling students, while School B incorporated mandatory tutoring time called RTI (Response to Intervention Time) for struggling students; and one teacher was allotted an inclusion teacher as an aid in the classroom to help individualize instruction for students

with special needs. The increase in student achievement scores from previous years for High Schools A and B correlate with their efforts to differentiate and meet struggling students' needs.

For High School C, teachers stated that they continued to struggle with applying differentiated lessons by the end of the year due to multiple levels of students and large classroom numbers. Some teachers at the school created group assignments, but the majority of the focus was on test preparation through multiple choice practice and test taking skills. As a result, a few teachers at High School C stated that they felt excelling students were often bored with lessons and that high achieving students' needs were overshadowed and ignored due to demands of struggling students.

In reflection, teachers at all schools stated that they felt they prepared the students for the exam to the best of their ability when it came to content and taking the exam. In addition, teachers at all schools claimed that they planned to make adjustments to their lessons by incorporating more engaging activities.

Correlation Analysis

Participants in this study have scores for teacher efficacy, student engagement, and student achievement. A Pearson correlation analysis was conducted to determine the value of the Pearson correlation coefficient between student achievement (EOC average) and student engagement (engagement average). The results are shown below in Table 10.

Table 10

Correlations of Student Achievement and Student Engagement

		EOC Avg	Eng Avg
EOC Avg	Pearson Correlation	1	.312**
	Sig. (2-tailed)		.000
	N	648	648
Eng Avg	Pearson Correlation	.312**	1
	Sig. (2-tailed)	.000	
	N	648	648

Note: **Correlation is significant at the 0.01 level (2-tailed).

As shown in Table 10 above, the Pearson correlation coefficient illustrates there is a moderate positive correlation between student achievement (EOC average) and student engagement (engagement average), $r(646) = .312$, $p < .0005$. The correlation is illustrated in a scatterplot (Figure 3).

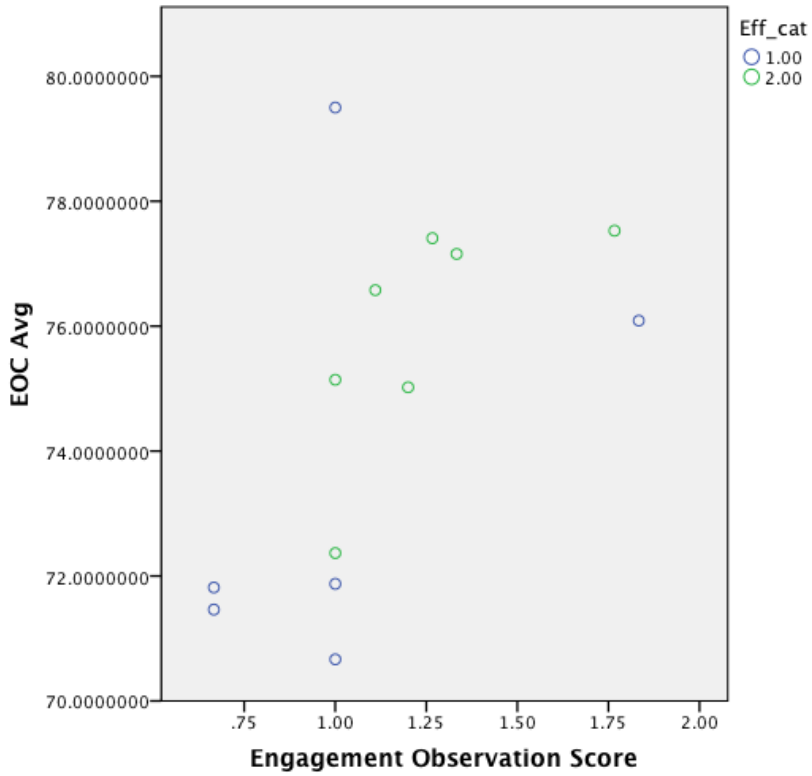

Figure 3. Teacher Efficacy and Engagement as Related to Student Achievement.

Note. Eff_cat = efficacy level. 1.0 = moderate level, 2.0 = high level.

The correlation as indicated by Figure 3 reveals that there is a positive linear relationship between engagement, teacher efficacy, and student achievement. Teachers with a moderate sense of efficacy (illustrated by blue dots) tend to be clustered around lower achievement and lower engagement. As efficacy increases to strong levels (illustrated by green dots), engagement level increases along with achievement scores.

Descriptive Statistics and ANOVA

A Univariate Analysis of Variance was conducted using SPSS statistics to determine any statistical differences between levels of engagement and levels of efficacy. Note that the researcher was included as a teacher subject in this study. Tests were run with the researcher's scores included and rerun with scores removed, and no statistical

difference was found in the results. Descriptive statistics are illustrated below in Table 11.

Table 11

Descriptive Statistics
Dependent Variable: EOC Avg

Eng Avg	Eff_Cat1	Mean	Std. Deviation	N
1.00	2.00	71.845360825	.0294875672	97
	3.00	74.928902984	2.9470485984	453
	Total	74.385078276	2.9213694230	550
2.00	3.00	76.867346941	.7209924341	98
	Total	76.867346941	.7209924341	98
Total	2.00	71.845360825	.0294875672	97
	3.00	75.273671601	2.7892107685	551
	Total	74.760483105	2.8481207616	648

Note: Eng Avg (Engagement level average) equals 1 as low-level and 2 as moderate-level. A level 3 (high) engagement average was not achieved in this study. Also, Eff_Cat1 (Efficacy level average) equals 2 for moderate level and 3 for strong level. No teachers in this study had a level 1 (low) efficacy mean.

As indicated by the Descriptive Statistics, the EOC mean increased from 71.84 at engagement level 1.0 (Eng Avg) and efficacy level (Eff_Cat1) to 74.92 at efficacy level 3; an increase is visible also as engagement level increases from a level 1.0 (74.38) to a level 2.0 and efficacy level is at 3.0 with an EOC mean of 76.86.

The *ANOVA Tests of Between-Subjects Effects* illustrated in Table 12 shows statistical significance between subject tests of student engagement and teacher efficacy at the $p<.05$ level [$F(2, 645) = 103.18$, $p < .001$]. In addition, Figure 4 illustrates this data in a graph. No post-hoc comparisons were made.

Table 12

ANOVA Tests of Between-Subjects Effects
Dependent Variable: EOC Average

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1272.159[a]	2	636.080	103.183	.000	.242
Intercept	1645456.715	1	1645456.715	266920.063	.000	.998
Eng_Avg	302.747	1	302.747	49.110	.000	.071
Eff_Cat1	759.639	1	759.639	123.226	.000	.160
Eng_Avg * Eff_Cat1	.000	0	.	.	.	.000
Error	3976.170	645	6.165			
Total	3627004.462	648				
Corrected Total	5248.329	647				

Note. R Squared = .242 (Adjusted R Squared = .240).

Figure 4 supports the data from Table 12 in an illustrative manner.

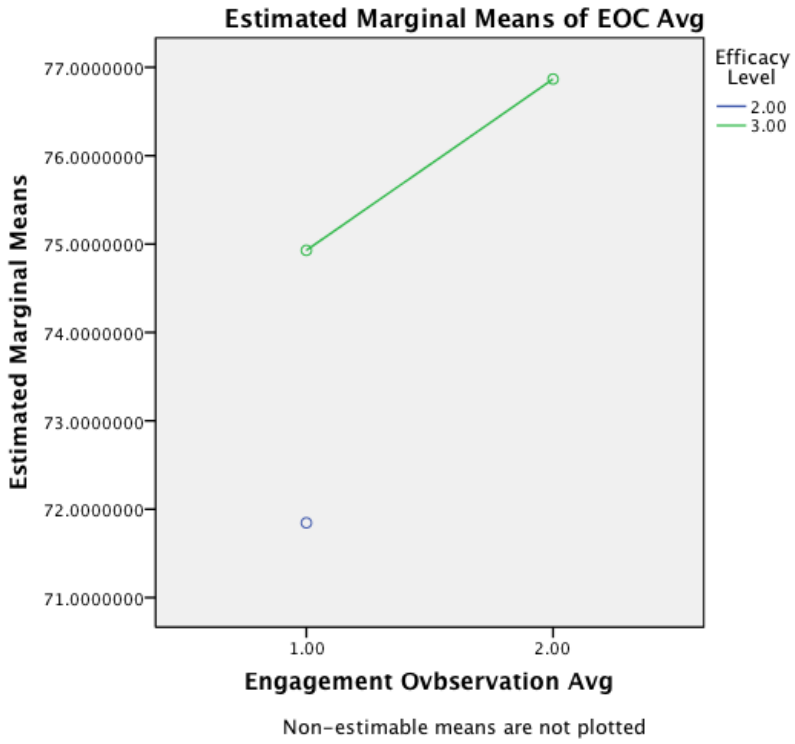

Figure 4. Estimated Marginal Means of EOC Average.

Of note in Figure 4 is the blue circle representing moderate level efficacy at the low-level engagement line (1) and corresponding to the lowest EOC achievement data at a mean just below 72. Also, the green line represents strong efficacy; and as it increases in engagement average, so does the EOC average from 75 to 77.

In all, student achievement increases as the level of teacher efficacy and engagement increases. These data correlate to teacher statements in May. Teachers at Schools A and B expressed more confidence in their students' performance on the U.S. History EOC exam than did teachers at School C; this correlates to the rise in scores for Schools A and B and the decrease in achievement scores from School C. In addition, Schools and A and B made a concentrated effort to increase differentiated instruction, reteach and reassess, along with increasing literacy skills; while School C focused on test preparation and stated they faced apathy and "burn out" from students by the end of the year.

Teachers at all schools stated that they planned to focus on creating more differentiated learning activities for the next school year by implementing student choice assignments, projects, and thematic units while incorporating fewer lectures. They believe that by doing so, they will increase student engagement and student achievement.

Summary

Chapter 4 provided the results of this study. Overall, data collected in this study indicate a positive correlation between student engagement and student achievement and a significantly positive relationship between teacher efficacy and student achievement. The relationship between teacher self-efficacy and student engagement as measured by the TSES was not found. Chapter 5 will discuss the data findings, address the research questions and provide suggestions for future research.

Chapter 5: Discussion

Introduction

This study analyzed the relationship of teacher self-efficacy and student engagement to eleventh-grade South Carolina U.S. History and Constitution EOC state exam scores. Chapter 5 applies the data found in the study to draw conclusions and discusses implications for additional research.

Discussion

This chapter uses the data from Chapter 4 to answer each of the research questions.

1. What is the relationship between U.S. History teacher self-efficacy and student engagement as measured by Tschannen-Moran and Hoy's (2001b) TSES?
2. What is the relationship between teacher self-efficacy and student achievement on the South Carolina U.S. History and the Constitution exam?
3. What is the relationship between student engagement and student achievement for students on the South Carolina U.S. History and the Constitution exam?

Data from this study provide information on the relationships between teacher self-efficacy and student engagement, teacher self-efficacy and student achievement, and student engagement and student achievement.

Teacher Self-Efficacy and Student Engagement

The first research question of this study centered on discovering the relationship between teacher self-efficacy and student engagement as measured by the TSES. The 24-item survey measured both personal teacher efficacy and three specific task-oriented constructs of efficacy including instructional efficacy, student engagement efficacy, and

management efficacy. The tool was administered to the teachers in the fall of 2014 and the total level of efficacy and construct levels are illustrated in Table 4.

According to the results of the TSES, teacher efficacy at all three schools rated at a strong level with School B and C at comparable scores (77.0 and 78.4, respectively) and School A somewhat lower but still rated strong at 70.2. Data from this survey are supported by interviews that were conducted following the administration of the survey in which teachers at all three schools stated that they feel confident in their ability to motivate students and to help students learn by getting to know their students on a personal level and helping students understand the content.

Despite fulfilling the emotional construct of student engagement and having a strong efficacy level overall, engagement was found to rate the lowest efficacy construct for teachers in District XYZ (School A, 62.5; School B, 65.3; and School C, 72.0) when compared to management (School A, 79.6; School B, 81.6; and School C, 81.9) and instruction efficacy (School A, 67.6; School B, 84.0; and School C, 81.2). Teachers at Schools A (63.4) and B (65.3) measured similar to each other with a moderate level of efficacy, while School C scored somewhat higher in student engagement (72.0). The fact that the student engagement efficacy data rated lowest of the three constructs is supported by interviews conducted with teachers. Common complaints mentioned include barriers related to engagement such as time, the standards, and feeling pressure to prepare for the EOC exam.

When discussing engagement and creating differentiated lessons, one teacher stated, “This is definitely an area where I am not where I would like to be.” Teachers claimed that it is challenging to find time to plan engaging lessons and even more problematic to implement activities such as projects and thematic lessons. As one teacher

mentioned, “We can’t spend time on relatable content.” Another teacher stated, “We have to focus on student performance on the test.” The argument of having to focus on student performance was a universal theme across schools, and the lack of implementation of higher-level engagement activities is evident in Table 5.

Teachers mentioned other inhibiting factors to planning engaging lessons such as large classroom sizes and multiple levels of students. Specifically at School C, teachers stated that they tend to ignore higher-achieving students due to trying to meet the demands of struggling students. In all, teachers claimed that they would like to implement more engaging activities and that they have the ability to do so, but there are outside factors that restrict their implementation. Table 6 illustrated the gap between engagement efficacy and observed engagement which rated moderate and low, respectively. This result was surprising considering this did not correlate with the literature review as found in Chapter 2; rather, it was the opposite. A stronger sense of efficacy should correlate to a stronger effort of performance according to Bandura (1993) and Tschannen-Moran et al. (1998).

Overall, the relationship between U.S. History teacher self-efficacy and student engagement as measured by the TSES and as illustrated through qualitative and quantitative data findings in this study did not correlate to past research. While teacher efficacy was found to be strong across all three schools in District XYZ, the student engagement construct of efficacy rated the lowest of the constructs for all three schools; and observations generally rated at a low engagement level as well. These findings are supported by teacher interviews in which teachers stated that they could greatly impact student learning even to challenging students; and they have the knowledge and ability to implement engaging lessons, but they perceive outside factors to inhibit their ability to

implement differentiated and engaging instruction.

Teacher Self-Efficacy and Student Achievement

The second research question focused on ascertaining the relationship between teacher self-efficacy and student achievement on the U.S. History and Constitution EOC exam. According to data in Chapter 4, student achievement increases as teacher efficacy increases. In addition, the ANOVA *Tests of Between-Subjects Effects* found statistical significance ($p < .001$). The data are illustrated in Table 12 and Figure 4.

In interviews, teachers overall expressed confidence in preparing students for the state exam despite the lack of feedback from the state other than student scores and barriers such as fixed standards with a lack of relevancy to students' lives and little time for student-centered projects. Teachers claimed that they spent time focusing on standards and material covered in the state social studies' support document along with incorporating weeks of review and reassessing struggling students, because the test not only measures a portion of what students learn but performance is used to judge teacher accountability.

Findings on teacher efficacy and student achievement correlate to research outlined in this study's literature review. The pressure to focus on standards and time spent in review, as expressed by teachers in the interviews, connect to the high-stakes environment and consequences as expressed by Nichols et al. (2012). As one teacher stated,

> The U.S. History EOC has been what schools all over South Carolina have been worried about and focusing on improving. It has become such a focal point for schools and the school report card, that teachers in many schools are teaching to the test.

Pressure of test performance has become the focus of the classroom.

In addition, research conducted by Noddings (2004) found that the threat of test failure often creates feelings of demoralization for teachers and students alike. In reference to student performance and the high-stakes testing consequences, a teacher stated, "It is unfortunate that students may work all year to maintain an A or B, yet see that grade fall due to one test." Students drop grade averages as a result of the test equating to 20% of their final average. Another teacher stated that she regrets having to tell students who worked to achieve all year and who grew in knowledge and skills that they did not "pass" the test. Similarly, another teacher expressed, "I equate their success and failure with my success and failure." Teachers are so invested in achievement with students making the "cut" score that they become disheartened when it is not achieved.

The qualitative data along with the quantitative data in this study indicate a significantly positive relationship exists between teacher self-efficacy and student achievement.

Student Engagement and Student Achievement

The final research question concentrated on determining the relationship between student engagement and student achievement on the U.S. History EOC exam. The Pearson correlation coefficient illustrates a moderate positive correlation between student achievement (EOC average) and student engagement (engagement average) with a significance of $p < .005$ (Table 10). In addition, the ANOVA *Tests of Between-Subjects Effects* (Table 12) indicates statistical significance between student engagement and teacher efficacy on student achievement at the $p<.05$ level.

Based on data as illustrated in Chapter 1 and findings on student achievement in Table 9, the mean scores for District XYZ have remained mediocre. There were slight

gains of the mean score rising since the EOC exam's implementation in 2008-2009, but 2015 shows a dip in performance from the previous year falling from a mean of 75.6 in 2014 to a mean of 74.82 in 2015. A reason for the mediocre mean scores in student achievement can be attributed to the low level of engaging activities observed in the classroom as illustrated in Table 5. Findings in this research study correlate to past investigations defined in the literature review, specifically in that gains in student engagement create increases in student achievement.

The qualitative data have illustrated the relationship between student engagement and student achievement for students on the South Carolina U.S. History and the Constitution exam. There is a positive and significant correlation between student engagement and student achievement. Specifically, as illustrated through data findings in District XYZ, mean scores have remained mediocre due to the lack of high-level student engagement activities such as authentic learning and inquiry-based lessons.

Conclusions

Data collected in this study indicate that there is a positive correlation between student engagement and student achievement and a significant relationship between teacher efficacy and student achievement; however, the relationship of teacher self-efficacy and student engagement as measured by the TSES was not found and did not correlate with past research findings as illustrated in this study's literature review. Overall, the findings from this study provide further understanding of the variables of teacher efficacy, student engagement, and student achievement.

Research outlined in the literature review illustrated that teacher self-efficacy is the extent to which teachers believe they can affect student learning (Ashton, 1984; Dembo & Gibson, 1985); and in addition, teacher beliefs in their ability to motivate and

create learning opportunities affect student achievement (Bandura, 1993). More recently, Tschannen-Moran et al. (1998) defined teacher efficacy as cyclical in nature; they stated, "Greater efficacy leads to greater effort and persistence, which leads to better performance, which in turn leads to greater efficacy" (pp. 233-234). The opposite is true as well: Weaker self-efficacy leads to poorer performances and thereby less efficacy.

Unexpectedly, this study found through cross tabulation and a Chi-Square test that while teacher efficacy levels are strong in District XYZ, engagement levels as measured through observations with the Active Learning Inventory Tool and supported by interviews are low. According to the literature review on teacher efficacy, teachers in District XYZ should have stronger engagement observation levels due to their strong efficacy levels. In interviews, teachers stated that they believe in their ability to motivate students and to help students learn by creating a positive learning environment. They stated that they believe in their ability to incorporate higher-level, differentiated engagement activities (engagement efficacy); yet they feel they are restricted due to outside factors such as time, standards, and state testing which is why they do not employ engaging activities.

According to the literature review, student engagement is composed of behavioral, psychological, emotional, and cognitive factors. Each of these factors creates student-centered, authentic engagement (Newmann et al., 1992; Newmann & Wehlage, 1993; Willms et al., 2009). Based on interviews, teachers are fulfilling the emotional factor by creating emotionally safe and supportive environments by forming positive relationships with students (Dotterer & Lowe, 2011; Li & Lerner, 2013); however, teachers are neglecting the cognitive factors by utilizing low-level engagement activities (Newmann et al., 1992; Newmann & Wehlage, 1993; Willms et al., 2009). Typical

activities observed in this study included lecture or summarizing, which rates at the low-level engagement range as measured by the Active Learning Inventory Tool during 25-minute observations. Proxy observers did not measure student behavior, emotional, or psychological factors because the purpose of this study was to solely investigate the types and levels of activities generally conducted in U.S. History classrooms and did not intend to study the three specific realms of student engagement.

An additional explanation for the absence of high-level engagement activities corresponds to the teacher arguments in interviews that the standards hold little importance for students due to the lack of diversity and relevancy to the 21st century. In addition, teachers mentioned the necessity of spending time "covering" standards and test preparation activities, particularly towards the end of the school year when testing is imminent. These qualitative data concur with research from Thornton (2001) in which he stated that standards are safeguarded by testing because they prohibit teacher discretion of defining subject matter, and this in turn restricts teachers' abilities to tailor content and learning to student needs and interests. As early as 2002, Gaudelli called for efforts to differentiate the curriculum to reflect the diverse population, and proponents for authentic engagement have called for schools to incorporate inquiry-based activities that increase relevancy and student learning as early as the 1990s to recently (Newmann et al., 1996; Newmann & Wehlage, 1993; Toshalis & Nakkula, 2012). Yet, as illustrated by data from this study for District XYZ, inquiry-based and higher-level activities are neglected in classroom lessons due to teachers' fear of testing repercussions.

The third variable in this study included student scale scores on the South Carolina U.S. History and Constitution EOC Exam that measured student achievement. The purpose of EOC exam scores are to measure school performance, and they are

intended to promote student achievement and document student mastery of the standards (South Carolina Department of Education, 2009). Scores utilized in this study included college preparatory students who were enrolled in a teacher's class all year and are generated from the May 2015 test administration. Data findings illustrate that the district and individual schools' mean scores have remained mediocre since test implementation.

The Pearson correlation coefficient (Table 10) illustrates there is a moderate positive correlation between student engagement (engagement average) and student achievement (EOC average), and the ANOVA *Tests of Between-Subject Effects* (Table 12) demonstrates statistical significance between subject tests of student engagement and teacher efficacy. This correlation between the variables can explain the lack of growth of the student mean scores in District XYZ due to the low engagement levels. Also, it corresponds to research illustrated in the literature review which indicates that teachers are unlikely to adopt inquiry-based approaches because they fear that time spent will negatively impact student performance on the state tests (Newmann et al., 2001; Saye, 2013), although research reveals that higher levels of authentic instruction are associated with higher achievement levels on standardized tests (Saye, 2013).

In all, recommendations for District XYZ center on increasing student achievement through teacher professional development on creating inquiry-based authentic engagement in social studies. Teachers should be allotted time for collegial collaboration to create authentic lessons and units and to discuss successes and failures with implementing the lessons. Also, consistent observations should be applied to assure teachers' successful incorporation of activities into the classroom, followed by collegial discussions of areas of improvement.

Limitations of the Study

According to Creswell (2012), limitations are possible weaknesses in a study that have been identified by the researcher and may impact the results of the study. These are useful for future researchers who may choose to design a similar study. The number of teacher participants limits this study concerning the impact of teacher efficacy and student engagement on U.S. History EOC scores. The recommended number of participants for a correlational study is 30, because the greater number of participants leads to fewer errors of variance and improved generalizations of findings (Creswell, 2012). This study includes only 13 total teachers following the loss of four participants. In addition, data include only schools within District XYZ in South Carolina, which is one of four districts in the county. Overall, the number of participants limits the generalization of this study.

Next, the Active Learning Inventory Tool was utilized to collect the levels of engagement learning activities conducted in U.S. History classrooms. Therefore, it did not account for behavioral or emotional/psychological levels of engagement for each student. In addition, observation data relied upon the proxies' accurate utilization and reporting of activities with the Van Amburgh et al. (2007) tool. Also, only three observations were conducted throughout the school year. Additional observations would allow for greater generalization of engagement levels.

Third, this study relied upon personal responses in gathering the data to measure teacher efficacy levels through utilizing the TSES and through interviews. Therefore, this data relied upon teachers being truthful with themselves and in their responses about their attitudes and feelings concerning their teaching efficacy, engagement, and achievement. In addition, the researcher established the cut scores for efficacy indicating

low, middle, and high efficacy levels. The cut scores, along with the researcher depending on personal truthful responses, may affect the accuracy of efficacy levels.

Recommendations for Further Study

One area of recommendation for further study includes the variable of teacher efficacy, both general and specific to the teaching task, due to the lack of correlation between teacher efficacy and student engagement found in this study. Future teacher efficacy research should include focus on clarifying the concept as it is related to task-oriented constructs such as student engagement and finding a system of measurement for the variable with greater validity. In addition, this study solely focused on the cognitive factor of engagement; therefore, further research focused on creating a valid and reliable tool utilized for classroom engagement observation at the high school level that includes all constructs such as behavioral, emotional, psychological, and cognitive factors would be of great benefit to further understand and analyze the engagement construct in the social studies classroom. Last, due to the small size of the population studied in this research, an area of recommendation would be to expand this study to districts throughout the state in order to increase the generalizability of this study.

Summary

This study aimed to analyze the impact of teacher self-efficacy and student engagement to eleventh-grade South Carolina U.S. History and Constitution EOC state exam scores. Data collected in this study indicate that there is a positive correlation between student engagement and student achievement and a positively significant relationship between teacher efficacy and student achievement; however, the relationship of teacher self-efficacy and student engagement as measured by the TSES was not found and did not correlate with previous research findings as illustrated in this study's

literature review. Overall, the findings from this study added to the current body of knowledge in the variables of teacher efficacy, student engagement, and student achievement along with highlighting future areas for research in relation to the variables of efficacy, engagement, and student achievement.

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Appendix

Teacher Consent Form

The Impact of Teacher Efficacy and Student Engagement on 11th grade South Carolina U.S. History and Constitution End-of-Course State Exam Scores

The goal of this study is to analyze the impact of teacher self-efficacy and student engagement on U.S. History and Constitution EOC scores in the district through the 2014-2015 school year. Please note that the decision to participate or not is solely up to you, and you may withdrawal at any time.

Data collection consists of four parts: 1) a teacher efficacy survey, 2) interviews, 3) student engagement observations, and 4) U.S. History EOC scores. For part 1, you will answer a 24-item questionnaire concerning your teacher self-efficacy; in part 2, your school proxy will observe your class for student engagement at least 3 times during the school year for no longer than 25 minutes utilizing a student engagement measurement tool; for part 3, students will take the South Carolina U.S. History End of Course Test; and Part 4 consists of interviews with three teacher volunteers from each school concerning self-efficacy. All names will be coded so that teachers and school are anonymous, and all data will be password protected.

Please feel free to ask questions at any time during this study. Once all data is collected and analyzed, a copy of the study's findings will be provided to the school and the district. Again, all individuals will remain anonymous, and there are no known risks and/or discomforts associated with your participation in this study.

The expected benefits associated with your participation in this study concerns data gained regarding the impact of teacher self-efficacy and student engagement on South Carolina U.S. History and the Constitution End of Course Exam. You will be provided with a $10 gift card to thank you for your participation at the conclusion of data collection.

Your participation is greatly appreciated. Please sign the consent form below which illustrates you have full knowledge of the nature and purpose of this research study.

_____ _____

Signature Date

Jacqueline Persinski, Doctoral Student, Gardner-Webb University