

STUDENT-ORIENTED TEACHING: MEASURING SELF-EFFICACY IN
RELATION TO TEACHING GOALS AND PROFESSIONAL DEVELOPMENT

by

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LIST OF ABBREVIATIONS

Analysis of Variance	ANOVA
Cognitive Stimulation and Autonomy	CSA
Confidence Interval	CI
Patterns of Adaptive Learning Survey	PALS
Primary Source Activity	PSA
Science Teaching Efficacy Beliefs Instrument	STEBI
Self-efficacy	SE
Self-efficacy for Student-oriented Teaching	SE-SOT
Self-regulated Learning	SRL
Teacher Self-efficacy Belief Systems	TEBS-Self
Teacher Sense of Efficacy Scales	TSES
Teaching American History	TAH

ABSTRACT

STUDENT-ORIENTED TEACHING: MEASURING SELF-EFFICACY IN RELATION TO TEACHING GOALS AND PROFESSIONAL DEVELOPMENT

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George Mason University, 2013

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The overall purpose of this research was to examine teacher self-efficacy and how it relates to teachers' motivational beliefs in the context of a professional development program for social studies. Specifically, the study investigates: (1) the relationship between teachers' student-oriented teaching self-efficacy (SE-SOT) and their self-efficacy for motivation and engagement, (2) the predictive validity of teachers' student-oriented teaching self-efficacy to their goal orientations, and (3) differences in teacher self-efficacy associated with the completion of a Teaching American History professional development cohort. From a sample of 144 in-service social studies teachers ranging in years of experience and grade-level, scales measuring teachers' self-efficacy and achievement goals for teaching were used to examine patterns within the data. Principal axis factor analysis procedures revealed only one underlying construct for teachers' self-efficacy for student-oriented teaching, which was significantly related to existing teacher

self-efficacy measures and predicted teachers' mastery, relational, and work-avoidance teaching goals. There were no significant mean differences related to completion of professional development between two groups of teachers, but teachers with more experience reported significantly higher levels of student-oriented teaching self-efficacy. Additionally, teachers at mid-career were more varied in their levels of SE-SOT, with greater variance reported among teachers who had not completed the professional development. The results affirm the need to persist in the development of teacher self-efficacy research more specifically among career teachers. Limitations and educational implications are also discussed.

CHAPTER ONE: INTRODUCTION

Curriculum reform efforts across academic domains are beginning to articulate the interdisciplinary skills that students should have after they leave secondary school. For example, the Common Core Initiative outlines the development of skills for reading and writing that are unique to each discipline (Common Core State Standards Initiative, 2012). More recently, the Council of Chief State School Officers (2012) published a “Vision for the College, Career, and Civic Life (C3) Framework for Inquiry in Social Studies,” – one of many frameworks to incorporate student-centered inquiry into the classroom. These national standards provide a framework for best practice. In full circle, test results are then used from nationwide assessments (administered by the National Assessment of Educational Progress, for example) to draw conclusions about student achievement and teachers’ classroom practices.

Meanwhile, survey research suggests that teachers feel less prepared to support students’ motivation and self-regulated learning when teaching the curriculum in their academic content area (Cleary, 2011). According to DiPerna (2006) student achievement is influenced not only by the teacher’s direct instruction of academic skills (i.e. reading, writing, math) but also by what he and his colleagues refer to as student “academic enablers” (p. 7). A model of student achievement that includes academic enablers considers the contribution of students’ beliefs, attitudes, and behaviors regarding

schoolwork. More specifically, he identified these to include “interpersonal skills, study skills, motivation, and engagement” (p. 7). In order for teachers to address these components of academic development in classroom instructional interventions, a number of rating scales have been designed to measure students’ academic motivation and learning strategies (DiPerna & Elliott, 1999; Pintrich, Smith, Garcia, & McKeachie, 1991; Stroud, 2006).

Despite the attention that has been given to student motivation and academic achievement, national surveys of school practitioners (including teachers and psychologists) suggest that they feel least prepared to implement interventions in this area. In one survey including 1,200 secondary teachers, 90% of respondents agreed that students’ self-determined and regulated learning was important when components were specifically identified (i.e. planning, monitoring, goal-setting), yet up to 40% of teachers did not feel prepared to address these skills (Cleary, 2011). Similarly, school psychologists reported up 27% of students were referred for motivational interventions and 28% needed support with strategies associated with self-regulation (Cleary, 2011). These surveys suggest there is a need to incorporate more connections among teachers’ ability to teach students academic skills while considering less direct academic enablers, such as motivation or study skills, that influence student learning of curriculum content.

One way to bridge the gap between these areas is to examine teachers’ educational beliefs in the context of a curricular professional development program. More specifically, a program that incorporates content knowledge with pedagogical support for teaching the inquiry skills outlined in the national standards. One area of particular

importance is in the social studies, where the scaffolds are not immediately visible. In fact, Wineburg refers to the scaffolding of historical thinking skills as an “unnatural act” (Wineburg, 2001). Compared to scientific inquiry, for example, where students learn the process of the scientific method that includes steps to form a hypothesis, collect data, and evaluate evidence. Meanwhile, research on the development of historical cognition suggests that teachers and students alike have a tendency to refer to historical sources as a reflection of information rather than a process that incorporates the evaluation of evidence (Lee & Ashby, 2000; Wineburg, 1999).

This practice of historical thinking skills helps students move beyond text comprehension to evaluate source information, audience, perspective, and context of historical texts (Wineburg, 2001). The ability to interpret and distinguish between primary and secondary sources is a key component to the common core initiative for historical literacy (CCSSI, 2012). Moreover, qualitative cases reveal that developing an evaluative understanding of history through primary sources helps foster more relevant connections to the curriculum (Wineburg, 1999). Increasing teachers’ understanding of the study of history as a set of core skills, in addition to content knowledge, may provide a collection of tools necessary for teachers to more effectively intervene in students’ engagement and self-regulation (De La Paz & Felton, 2010; Harlow, DeBacker, & Crowson, 2011). In this domain, it is entirely up to the teacher to make these thinking processes visible (e.g. sourcing, close reading, contextualization), yet there is very little research in social studies professional development that elaborates on findings related to teachers’ instructional practice (Van Hover, 2008).

In general, opportunities for professional development in social studies can vary widely and be grounded in content from different historical time periods or thematic lenses, such as geography, civics, or economics. Furthermore, it is offered by a variety of organizations throughout the country (i.e. museums and historic sites). In an effort to foster partnerships among these organizations in support of teacher development in American history, a number of Teaching American History grants have been funded since 2001. The purpose of these projects is primarily to raise student achievement by increasing teachers' knowledge, understanding, and appreciation of the content. Yet, research still emphasizes teachers' content mastery or describes their experiences in different types of professional development programs (Van Hover, 2008). This is true despite research in pre-service teacher preparation programs, which suggests that teachers' conceptual understanding of how history should be approached influences their pedagogical decisions (Yeager & Wilson, 1997).

For in-service teachers, their instructional practice is more often than not assessed based on student achievement data, which provides little information on the complexity of interactions in the classroom environment that contributes to student learning and achievement. Therefore, research from an educational psychology perspective may provide more detailed information on where teachers need support in order to implement reform-oriented teaching strategies. Furthermore, it may inform what teacher characteristics or interventions influence teachers' instructional behaviors. Through this lens, the purpose of this study is to explore specific components of teacher self-efficacy for making content knowledge relevant and supporting students' ownership of learning

(referred to more broadly as self-efficacy for student-oriented teaching). These constructs will be examined in relation to teachers' self-efficacy for motivating students and as predictors of their teaching goals. In the context of a Teaching American History professional development program as an intervention to support teachers' reform-oriented instructional methods, the research will also investigate group differences in teacher self-efficacy related to their learning in the professional development program.

CHAPTER TWO: LITERATURE REVIEW

The Social Cognitive Theory and Teacher Motivation

Bandura's social cognitive theory outlines a triadic relationship in which personal, behavioral, and environmental factors reciprocally interact to guide people's behavioral choices. In this model, one's thoughts and beliefs act as mediators between knowledge and action (Pajares, 1996). Because of the importance of beliefs in theories of motivation and self-regulation, the social cognitive theory provides a framework for investigating constructs such as self-efficacy (Bandura, 1997; Pajares, 1996; Tschannen-Moran, Hoy, & Hoy, 1998) and achievement orientation (Ames, 1992; Butler, 2007; Dweck & Leggett, 1988). Furthermore, Zimmerman's (2002) model of self-regulation suggests the activation of such beliefs is an important motivational component in a cycle of forethought, performance, and self-reflection.

More specifically, and operating within the social cognitive framework, self-efficacy beliefs are a self-assessment of competence that prompt teachers' instructional behaviors while goal orientations explain the purpose of the behavior, once it is activated (Bandura, 1994). These motivational processes work in tangent to explain the choice and purpose that underlie teachers' instructional practices. Accordingly, goal orientation theorists recognize a 2x2 framework that explains one's achievement orientation to specify further distinctions regarding the purpose of one's behavior (Elliott, 2005). The

first element in this framework discerns between a mastery and performance orientation. The former suggests one is motivated for the purpose of learning and is judged upon self-standards, whereas the latter describes one who is motivated in order to demonstrate competence relative to others (Ames, 1992; Eccles & Wigfield, 2002; Elliott, 2005). Further, an approach and avoidance distinction has also been identified to investigate adaptive and maladaptive behaviors relevant to performance outcomes (Elliott, 2005). Given the theoretical relation between one's competence beliefs and goal orientations, self-efficacy has often been investigated as a predictor of achievement orientations (Cho & Shim, 2013; Runhaar, Sanders, & Yang, 2010).

In the context of a social studies professional development program, there is an opportunity to explore self-efficacy constructs and teacher motivation when “social studies teaching” is conceptualized as a domain that can be learned. When learning these new teaching skills, with an emphasis on historical thinking and inquiry, teachers’ practice may be influenced by their self-efficacy beliefs. In this case, self-efficacy, referring to one’s beliefs in his ability to carry out a specific task in a specific context (Bandura, 1997), needs to be flexible enough to capture various components of instructional support that align with curriculum reform efforts for student-centered learning (Wheatley, 2005). Doing so may create an opportunity for more directed investigations on teacher-student interactions that contribute to the classroom social climate and student learning outcomes. To that end, I first situate research in the context of teachers’ professional learning, review the emergence of teacher self-efficacy, and identify literature on autonomy support and self-regulation to define specific measures of

teacher self-efficacy. Finally, I conclude with a goal orientation model to address the theoretical contribution of teacher self-efficacy for instruction.

Professional Learning and Development

Despite numerous program structures and learning opportunities, the primary goal of professional development is to facilitate changes in teachers' instructional beliefs and practice in order to raise student achievement (Guskey, 2002). Research provides a variety of frameworks from which to interpret the effectiveness of professional development models (see Fraser, Kennedy, Reid, & McKinney, 2007 for a review). Within these models, teachers' personal motivational beliefs are incorporated as factors that contribute to teacher change (Fraser, et al., 2007; Gregoire, 2003; Opfer & Pedder, 2011). Moreover, in Opfer and Pedder's (2011) review of literature on the conceptual complexity of teachers' professional learning, they call for research to move beyond the effects of individual programs of professional development to investigate the contributions of the learner and context to changes in instructional practice. Further, they distinguish between teachers' learning and development – suggesting that professional development refers to causes and effects of a specific program, whereas a focus on teacher learning explains why learning occurs in a given context (Opfer & Pedder, 2011). From this perspective, researchers often explore changes or differences in teachers' general sense of efficacy in order to operationalize teacher beliefs in the context of professional development (Lakshmanan, Heath, Perlmutter, & Elder, 2011; Lee, Cawthon, & Dawson, 2013; Roberts, Henson, Tharp, & Moreno, 2001).

Teacher Self-efficacy

Self-efficacy emerged as one of the first constructs for studying teacher motivation (see Tschannen-Moran, Hoy & Hoy, 1998 and Henson, 2002 for reviews). The measurement of this construct allows researchers to investigate the relationship between teachers' beliefs and classroom practice. Since its conceptualization in the 1960s – two different theoretical strands have been examined. First, teachers' self-efficacy was measured by two items that stemmed from a locus of control theory of motivation (Tschannen-Moran, Hoy, & Hoy, 1998). That is, whether teachers believed student learning and motivation was attributable to their teaching or to external environmental factors outside of their control. Next, following Bandura's social cognitive theory, teacher self-efficacy was redefined as the teacher's beliefs in his personal capabilities to perform instructional tasks. From a social cognitive perspective, there are also important conceptual distinctions between self-efficacy and outcome expectancy, the latter referring to the outcomes expected given a specific level of performance (Pajares, 1996). The nuances in distinguishing between locus of control attributions, personal ability beliefs, and outcome expectancies have sparked a number of attempts to develop global measures of teacher self-efficacy (Gibson & Dembo, 1984; Dellinger, Bobbet, Olivier, & Ellet, 2008; Tschannen-Moran & Hoy, 2001).

In Gibson and Dembo's (1984) scale development – they found two distinct factors that aligned with theoretical differences in ability and expectancy beliefs. They defined these factors as teachers' personal teaching efficacy and general teaching efficacy. The Gibson and Dembo (1984) scales were tested in a sample of 55 practicing

teachers and the measure was able to distinguish teacher efficacy from other factors indicative of good teaching, such as flexibility and verbal ability. The researchers followed with classroom observations of a small sample of high and low efficacious teachers. From these observations, they found that high efficacy teachers persisted more with students who were struggling and spent more time on large group instruction. Despite the researcher's recommendation that the scale continue to be developed based on Bandura's self-efficacy theory, the measure has been adapted in a number of more recent investigations of teacher self-efficacy (Deemer, 2004; Morrell & Carroll, 2003).

In 2001, Tschannen-Moran and Hoy reviewed existing measures of self-efficacy and addressed the challenges in capturing the construct. In their initial review, they pointed out that task specificity is one of the most problematic areas in teacher self-efficacy research. Tasks could be specifically defined related to content area, specific students, or grade-level. In order to address the relative strength of teachers' beliefs, items on Tschannen-Moran and Hoy's (2001) scale were written for teachers to determine "how much" they believed they could carry out tasks related to instructional strategies, classroom management, and student engagement. The items were validated with positive correlations to existing measures of self-efficacy and a negative association with feelings of alienation at work. Overall, the scale added a wider range of teaching tasks to the measurement of self-efficacy from a social cognitive perspective.

As in previous studies of teacher self-efficacy, Dellinger et al. (2008) clearly distinguished between outcome expectancies and ability beliefs using Bandura's social cognitive model for the construction of their self-efficacy scale, the Teacher Efficacy

Belief System (TEBS-Self). They argued that many previous measures of self-efficacy are not aligned with the theory, one exception being Tschannen-Moran and Hoy's (2001) scale development. Though well aligned with theory, Dellinger et al. (2008) suggest that Tschannen-Moran and Hoy (2001) used the terms teacher efficacy and teacher self-efficacy interchangeably. By leaving the language more open to the readers' interpretation, this reciprocity contributes to the challenges in measuring and defining teacher self-efficacy in relation to specific behavior or performance outcomes. In this study, Dellinger et al. (2008) drafted new items to address this inconsistency and defined teacher self-efficacy as a system of individual beliefs in one's capabilities "to perform specific teaching tasks at a specified level of quality in a specific situation," (p.753). In separate studies, they found self-efficacy beliefs to be significantly related to positive aspects of school culture and performance and only moderately correlated to other measures regarding task specificity (i.e. distinguishing between subjects and group of students taught). In this study, only correlation data were reported and there is no information on how participants in the sample responded to items on the scale (means and standard deviations).

The use of teacher self-efficacy scales. A large body of research on teacher self-efficacy relies on correlation data to develop the construct (Henson, 2002), including how different measurements of teacher self-efficacy compare (Hoy & Spero, 2005). Pre-service and novice teachers are also frequently targeted because in this stage because they are learning and developing skills associated with good teaching (Duffin, French, & Patrick, 2012; Hoy & Spero, 2005; Morrell & Carroll, 2003). Furthermore, differences

have been found in how pre-service and career teachers rate their self-efficacy and perceive differences between factors on the scale (Fives & Buehl, 2009; Tschannen-Moran & Hoy, 2007). This is important given that teachers may be focused on learning or improving specific skills in relation to their own teaching at different points in their careers.

Teacher Self-efficacy and Professional Development

Given these notable differences between practicing and pre-service teachers' ratings of self-efficacy, the extension of teacher self-efficacy research to models of professional development is warranted. Further, the investigation of self-efficacy among practicing teachers provides the opportunity to explore the development of self-efficacy in a more cyclical process of learning, implementation, feedback, and reflective practice that is not possible among pre-service teachers in a certification program. In this context, research on teacher self-efficacy can more thoroughly address the sources of self-efficacy for facilitating teacher change, namely the significance of mastery experiences (Tschannen-Moran & McMaster, 2009).

Self-efficacy is used in some professional development studies to explore group differences, for example between elementary and secondary teachers (Lee, Cawthon, & Dawson, 2013), to investigate controlled effects related to professional development (Ross & Bruce, 2007), or based on length of time participating in a program (Roberts et. al, 2001). Using Tschannen-Moran and Hoy's (2001) Teacher Sense of Efficacy Scale (TSES), Ross and Bruce (2007) found significant differences in teachers' self-efficacy for classroom management in comparison to teachers who did not participate in a 3-month

professional development program for standards-based mathematics teaching. They attributed this finding to the emphasis on the mathematics curriculum in the training sessions and explain that when implementing new teaching strategies that meet content area standards, teachers' primary concern is usually on classroom management followed by student engagement (Ross & Bruce, 2007). Similarly, the length of time of participation in a professional development program has revealed more consistent gains in personal teaching self-efficacy among teachers' whose initial reports were low (Roberts, et al., 2001). These findings broadly support the notion that participation in professional development programs plays a role in the development of teachers' self-efficacy beliefs.

Although there are a variety of approaches to incorporating self-efficacy in professional development, it has been difficult to measure within subject changes. Roberts et al. (2001) for example used data collected from different length professional development programs over seven years and calculated changes in teachers' summed scores on the Science Teaching Efficacy Beliefs Instrument (STEBI) to investigate significant gains in personal teaching self-efficacy. While results did reveal significant gains related to the length of the program, a ceiling effect skewed initial data analysis – of 330 teachers included in the initial data, only 188 of these were included in the final analysis. This limits the interpretation of implications for teachers' self-efficacy.

In one other study examining the effects of professional development treatment conditions, in addition to within subject patterns, Tschannen-Moran and McMaster (2009) used a repeated measures design including four professional development

treatment groups to incorporate increasing levels of support targeted to the sources of self-efficacy. The professional development focused on strategies specifically to improve teachers' reading instruction. Therefore, Tschannen-Moran and McMaster (2009) measured teachers' self-efficacy for reading instruction (containing seven items with a high reliability at .91) in addition to using the short form of TSES scale (Tschannen-Moran & Hoy, 2001). In their analysis, they found that different measures of teacher self-efficacy revealed contrasting results. The repeated measures ANOVAs revealed that all teachers, regardless of treatment group, increased their general sense of efficacy over time. In contrast, the self-efficacy scale for reading instruction suggested there might be a non-linear pattern of development in teachers' self-efficacy beliefs. This is extracted from the significant within-subject treatment by time interactions. Teachers in the first and fourth treatment groups (representing the least and highest amount of professional support) increased self-efficacy over time more than teachers in middle treatment groups, who did not receive feedback following modeling or practice (Tschannen-Moran & McMaster, 2009). The differences in patterns found from these two measures of teachers' self-efficacy offer support for using more specific measures when exploring patterns related to professional development.

Measuring teacher self-efficacy for career teachers. In light of these findings and in order to extend self-efficacy to teachers' professional learning— it is next relevant to consider other areas of literature that could contribute to the development of teacher self-efficacy measures. In a review of literature, Wheatley (2005) suggests that current measures of teacher self-efficacy offer little for professional development because they

do not provide information on which types of instructional tasks teachers feel more efficacious toward and how outcome expectancies contribute to within teacher variance in different contexts. Furthermore, he questions the use of current teacher self-efficacy scales in more student-oriented approaches to instruction.

As already noted, student engagement and the development of students' discipline specific cognition is an area of skill development that teachers learn throughout their career (Gabriele & Joram, 2007; Tschannen-Moran & Hoy, 2007). Furthermore, national survey research has shown that teachers seek training to better understand student motivation and self-regulation (Cleary, 2011). Therefore, more specific measurements of teachers' self-efficacy in these areas may provide more information on teachers' self-perceptions of ability.

To some extent, researchers have incorporated self-efficacy for motivation and engagement as a component to teacher self-efficacy measures. In 2009, Hardré and Sullivan focused on teachers' self-efficacy more specifically for motivating students. They measured teachers' self-efficacy for diagnosing and intervening in students' motivation and predicted that more efficacious teachers would use more internally focused and autonomy-supportive teaching strategies. The overall results supported the researchers' hypotheses and they found teachers' self-efficacy for motivation to be attributed to their interpersonal relationships with students. At the same time, however, strong correlations between teachers' perceptions of their students' motivation and their own self-efficacy suggests that teachers who have more motivated students also feel more efficacious. Furthermore, the negative relationship between teachers' self-efficacy and

causes of students lack of motivation suggests that teachers do not feel capable of influencing students' internally focused motivation (operationalized as relevance/value and future utility). These findings point to extant challenges in using non-specific tasks to measure teachers' self-efficacy for motivation (e.g. "I feel confident that I can motivate students in my class who are unmotivated.") that could be addressed by identifying more specific behaviors to be taught and practiced, as Wheatley (2005) suggests, drawing on an integration of theory in motivational psychology.

Self-efficacy for Student-Oriented Teaching

The conception of self-efficacy for student-oriented teaching then, invokes the role of the teacher and teacher-student interactions in establishing the classroom social climate – perceptions that have traditionally been studied in the literature on classroom goal structures (Ames, 1992; Patrick, Kaplan, & Ryan, 2011; Patrick & Ryan, 2009; Patrick, Turner, & Meyer, 2003). Research in this area has found that students' perceptions are influenced by teachers' affective and pedagogical interactions, for example, pointing out to students how they are preparing for the future, listening to what students say, providing strategies to help students learn, and eliciting student questioning (Patrick & Ryan, 2009). Meanwhile, self-determination theorists recognize these interactions as teachers' interpersonal style when communicating with students, which ranges between controlling and autonomy supportive tendencies (Assor, Kaplan, & Roth, 2002; Reeve, 1998; Reeve & Yang, 2006). From this perspective, researchers seek to explain the individual variance in one's intrinsic motivation based on how three psychological needs: (a) competence; (b) relatedness; and (c) autonomy, are met in a

given social context (Connell, 1990; Ryan & Deci, 2000). Finally, research on the development of students' self-regulatory capabilities favors the use of social guidance and modeling through four phases of observation, emulation, self-control, and self-regulation (Schunk & Zimmerman, 2007) and is attune with external directives (e.g. goal setting, feedback, evaluation) that encourage autonomous regulation (Reeve, Ryan, Edward, Deci, & Yang, 2012).

Attending to this convergence, a measure of self-efficacy for student-oriented teaching may draw on practices that align with cognitive and motivational components of autonomy support and the facilitation of autonomous regulation. Autonomy has been defined as “the experience of choice in the initiation, maintenance, and regulation of behavior, and the experience of connectedness between one’s actions and personal goals and values,” (Connell, 1990, pp. 62-63). Autonomy in self-regulation processes refers to the individual’s perception of the locus of causality for an activity (e.g. internal v. external). Further, autonomy *support* refers to the ability to communicate this experience to others (Connell, 1990).

Relevant to teacher professional development, training and intervention programs have found that motivational practices and interpersonal styles can be taught to both practicing (Turner, Warzon, & Christensen, 2011) and pre-service teachers (Reeve, 1998). Although these studies do not assess teacher self-efficacy for the strategies learned, they lend support for the development of such measures. For example, in workshops over the course of nine-months, Turner et al. (2011) strengthened teachers’ reform oriented mathematics instruction by embedding strategies that aligned with key

principles across theories of motivation, including competence, belongingness, autonomy, and meaningful learning. This particular example suggests professional development that is attentive to new ways of approaching content area instruction could implicitly inform teachers' motivational practices, as explicated in teachers' individual interviews and self-reflections on their learning. Further, Reeve (1998) found that training for autonomy-supportive practices can effect change in teachers' interpersonal styles even among teachers who are innately oriented to controlling strategies. These findings were limited to teachers' perceptions about autonomy supportive strategies and did not extend to their ability beliefs in practice.

One approach to facilitate the integration of this line of educational psychology research with curriculum reform and professional development is to be able to track more specific changes in teachers' self-efficacy that have been linked with positive achievement outcomes and increased student engagement. Moreover, items that measure these beliefs should also reflect teachers' perceptions regarding the practical effects of these strategies on students' learning. Therefore, scales that measure the teachers' belief in their ability to make content knowledge relevant and support students' ownership of learning could be used more specifically to capture teachers' ability beliefs in a comparable way. In order to write items for these scales, literature on classroom applications and teacher behaviors related to autonomy support and self-regulation are notable (see Table 1 and Table 2 for selected articles), along with qualitative contributions from the implementation of curriculum reform models including student-centered inquiry.

Fostering relevance. Teachers may perceive a broader definition of relevance as classroom content that taps students' interests, that is valuable and useful, and that relates to personal goals. From a self-determination perspective, these connections support students' autonomy when they are more internally derived (Ryan & Deci, 2000). Empirical research has found that fostering relevance is an important predictor for students' behavioral and cognitive engagement (Assor et al., 2002) and that students with low performance expectations perform better when they perceive the relevance and utility of the learning task (Hulleman, Godes, Hendricks, & Harackiewicz, 2010).

As noted, teachers' interpersonal style when communicating with students has influence on students' perceived autonomy (Reeve & Yang, 2006). Furthermore, when designing instruction at a more task-specific level, it is important to consider that students may judge the relevance of tasks based on their own personal values (Wigfield & Eccles, 2000). In this case, an externally provided rationale may foster students' perceptions of relevance or the teacher may ask students to make their own connection regarding the utility or interest for a given task (Hulleman et al., 2010; Jang, 2008). More specifically, in social studies education, teachers recognize that inquiry-based pedagogy, through primary source analysis, provides an opportunity to focus on relevant and practical skills, such as critical thinking, reading, writing, and considering perspective (Wood, 2012). Because one's personal judgment of relevance may vary by content and context, investigating the predictive nature of teachers' ability to consider these judgments when planning instruction may be useful for capturing changes in one's instructional approach.

Table 1 offers examples of teacher interactions that foster relevance along with important implications from selected articles.

Table 1: Theoretical Support for Teachers' Self-efficacy to Foster Relevance

Article	Identified teacher behaviors	Important findings / implications
Assor et. al, 2002	Explain the contribution of the learning task to goals	Fostering relevance is an important predictor for students behavioral and cognitive engagement
	Solicit student thoughts about learning tasks	
	Allow criticism	Students can distinguish between teachers' autonomy-affecting behaviors
	Make connections between school and other areas in life	
Jang, 2008	Provide a rationale for learning tasks	Rationales help support and sustain students' cognitive engagement
	Rationales convey personal utility, value, and benefit	Engagement in a learning task is better explained by perceived autonomy and importance than interest
	Recognize students' negative feelings	Provides insight to educators' role in enhancing task values of school work
Reeve & Yang, 2006	Identify students' personal values about subjects (i.e. listening, allowing students to talk, empathetic perspective-taking)	Teachers' interpersonal style in communicating with students influences perceived autonomy
Hulleman et. al, 2010	Ask students to make their own connection between content and individual interests	Students with low performance expectations increased interest in a learning task when asked to explain relevance
		Students performed better when utility perceptions were higher

Supporting student ownership of learning. This construct addresses components of self-regulation that have been identified as important for students to take charge of their own learning, for example monitoring performance and selecting appropriate task strategies (Zimmerman, 1989). Teachers have described the facilitation of students' ownership of their learning as an affective outcome of constructivist teaching strategies, inquiry, and the provision of choice (Flowerday & Shaw, 2000; Wood, 2012). In a phenomenological study, teachers used the term "ownership" most often to describe students' affective reactions to choices and believed that choice promotes cognitive self-regulation (Flowerday & Shaw, 2000). These perspectives provide language that is useful to convey the internal locus of causality that is necessary to facilitate autonomous regulation (Reeve, et al., 2012) and suggest that teachers may perceive "ownership" and "self-regulation" synonymously. Furthermore, qualitative data from Turner et al. (2011) provides examples of how teachers perceive ownership of their students learning. For example, one teacher with less confidence in her abilities in math noted that "she was 'saved' by her students: 'they had to explain their problem to me. So they had control of their problem, then they had to teach me their problem,'" (Turner et al., 2011, p.743). Congruent with these beliefs, there is some practical support for the measurement of teachers' ability to support students' ownership of their own learning.

Mindful of this purpose, observations from classrooms where the teacher has been identified as highly supportive of students' self-regulated learning (SRL) describes teacher-student interactions that promote SRL and provide evidence that students in these classrooms are more adaptive, regulated and mastery oriented (Perry, VandeKamp,

Mercer, & Nordby, 2002). For example, providing choices that allow students to control the level of challenge for a given task or have control over the learning environment (Perry, et al., 2002) can meet students' psychological need for competence in order to internalize regulation (Katz & Assor, 2007). Although providing choices may be one means support students' ownership of learning, the empirical relation between choice and academic motivation is complex (see Katz & Assor, 2007 for a review). In their review, Katz and Assor (2007) provide evidence that choice promotes motivation only when it meets students' psychological needs for autonomy, competence, and relatedness. For example, Assor, Kaplan, and Roth (2002) found that fostering relevance, more than providing choice alone, was more strongly linked to students' perceived intrinsic motivation.

Given the broader purpose of this scale to capture "ownership of learning" it is useful to also include behavioral and cognitive components, where teaching strategies target specific learning skills (Zimmerman, 2002) and opportunities for independence (Stefanou, Perencevich, DiCintio, & Turner, 2004). Findings on applications of SRL suggest that explicit strategy instruction and process related feedback promotes ownership and transfer of strategy use (Paris & Paris, 2001; Schunk & Zimmerman, 2007). Also drawing on classroom observations on features of student ownership and decision-making, Stefanou et al. (2004), describe how autonomy supports function in the classroom environment to include organizational, procedural, and cognitive autonomy. They propose that cognitive autonomy was most directly related to students' academic engagement and intrinsic motivation. Further, they describe teacher behaviors that

encourage ownership of learning to include, “asking students to justify or argue for their point, asking students to generate their own solution paths, or asking students to evaluate their own or others’ solutions,” (Stefanou et al., 2004, p. 101). These ecologically derived conclusions describe ownership related to how learning content is structured. Although ownership may take a variety of forms, it conveys the internalization of learning processes and content (see Table 2 for a summary of these behaviors and implications). Describing this process, Zimmerman (2002) explains that autonomy and intrinsic motivation ultimately affect the quality of students’ ownership of learning.

Table 2: Theoretical Support for Teachers' Self-efficacy to Support Ownership of Learning

Article	Identified Teacher Behaviors	Important Findings / Implications
Assor et al., 2002	Provision of choice	Providing choice is less likely to be perceived by students as intrinsically motivating
	Independent thinking (i.e. shows students how to do things on their own, allows students to make decisions)	
Paris & Paris, 2001	Provide opportunities for self-assessment	Synthesizes findings on classroom applications of research on SRL Teachers’ explicit instruction, student experience, and context play a role in developing and transferring SRL processes
	Plan open-ended tasks to support cognitive engagement	
	Explain strategy use for specific tasks	
	Minimize performance comparisons	

Perry et al., 2002	Provide choices that allow students to control the level of challenge	Students in high SRL classes are more adaptive, regulated, and mastery oriented
	Provide choices for students to control the learning environment	Students in low SRL classes exhibit more self-handicapping behaviors and work avoidance
	Provide choices for students to present their learning	
	Opportunities for self- and peer-evaluation Emphasis on personal growth and mastery evaluation	
Stefanou et al., 2004	Organizational autonomy allows students some ownership of the learning environment	Cognitive autonomy is most likely to support students active engagement in learning
	Procedural autonomy gives students some ownership of the presentation of their learning	Procedural and organizational autonomy is less likely to be about engagement, but is included as behavioral and strategic independence
	Cognitive autonomy encourages students to justify and evaluate ideas	
Zimmerman, 2002	Encourage students to establish goals	The quality of students' ownership of learning is affected by their level of efficacy and intrinsic motivation
	Teacher modeling develops metacognitive awareness	Self-regulation is teachable, but this is often not done explicitly in school
	Ask students to self-record learning tasks	
	Discuss strategy adaptation and time management	
	Allow control over physical or social environment	

Teacher Self-efficacy and Achievement Goals for Teaching

Considering teacher self-efficacy more broadly, regardless of the scale used, this construct gains attention in literature on instruction and teacher professional development because it correlates with positive student outcomes and teaching behaviors (Tschannen-Moran & Hoy, 1998). Within an achievement goal framework, self-efficacy is often examined as an antecedent to the type of goal structure the teacher creates by tending toward mastery or performance-oriented instructional practice (Deemer, 2004; Wolters & Daugherty, 2007). The Patterns of Adaptive Learning Survey (PALS) is commonly used to operationalize these practices and assesses the extent to which teachers self-report their provision of feedback to emphasize individual growth (mastery practices) or performance based on social comparative standards (performance practice) (Midgely et al., 2000). The positive link between teachers' sense of efficacy and a supportive motivational climate (Deemer, 2004; Wolters & Daugherty, 2007) provides evidence that levels of teacher self-efficacy effect the teacher-student interactions that contribute to the overall learning environment. Likewise, the theoretical components of teacher self-efficacy for student-oriented teaching, as formerly identified, suggest that these measures could be significantly related to teacher-student interactions and interpersonal relationships in the classroom (Hardré & Sullivan, 2009; Reeve & Yang, 2006).

Postulated within the theoretical framework of self-efficacy, an exploration of teachers' self-efficacy for student-oriented teaching should be considered in relation to

pre-existing measures of motivation that provide information about divergent approaches to instruction, such as performance versus mastery, or approach-avoidance. Achievement motivation has only recently been applied to teachers' strivings for success in school (Butler, 2007), there is evidence that links self-efficacy to the adoption of mastery and performance-approach goals for teaching (Cho & Shim, 2013). Considering teachers' personal achievement goals for teaching in relation to their personal ability beliefs offers the opportunity to compare teacher beliefs at a similar level of specificity (e.g. each measures teachers' motivational beliefs about their own instruction) in an area where theoretical paths (using existing measures of self-efficacy) have begun to emerge. Also, because self-efficacy beliefs are formed from teachers' perceptions of success (i.e. mastery experiences), assessing teachers' achievement goals for teaching provides an opportunity to investigate the potential positive and negative paths when teacher self-efficacy is redefined from teacher- to student-focused.

Teachers' achievement goals for teaching were proposed for research on teacher motivation in Butler's (2007) investigation of teachers' help-seeking behaviors. Its conceptualization stems from research on students' achievement goal orientations, where a mastery-approach goal orientation is associated with students' more adaptive patterns of learning and cognitive engagement whereas an ability-approach goal orientation is characterized by one's attention on performance and social comparison (Dweck, 1986; Dweck & Leggett, 1988). For teachers, Butler (2007) defined four goal orientations to include: (a) mastery-oriented strivings for professional learning and personal competence; (b) ability-approach to prove performance capabilities relative to others; (c)

ability-avoidance to avoid demonstrating incompetence to others; (d) work-avoidance to teach while expending very little effort; and an extension of the model includes (e) teachers' relational goals to strive for personal connections with students (Butler, 2012). In Butler's (2007) initial study examining achievement goals for teaching, she found similar patterns in teachers' behavior that paralleled findings on students' achievement goals for learning. That is, mastery goals were positively related to teachers' help seeking to improve learning, whereas threats to self-esteem negatively predicted this behavior. Likewise, ability-avoidance goals were negatively related to help seeking – though ability-approach goals did not reveal any significant positive or negative patterns (Butler, 2007).

To relate the model more directly to teachers' instructional practices, Retelsdorf, Butler, Streblow, and Schiefele (2010) built on earlier investigations. In their research, they measured teachers' approach to instruction using the teacher scales on the PALS and also adapted a measure of practices related to Cognitive Stimulation and Autonomy (CSA). They found that teachers' mastery oriented teaching goals were moderately and significantly related to both mastery approaches to instruction and CSA. These findings offered support to validate the model, among a number of additional hypothesized relationships between teaching goals, interest in teaching, and burnout. In this particular study, the strongest support was found for teachers' mastery and work-avoidance goals, while results on ability orientations (approach and avoidance) were less consistent. The structural equation models revealed, for example, that ability avoidance goals were related to teacher burnout, but they were not able to significantly predict cognitive

stimulation, interest in teaching, or performance practices. These findings could be important if one were to distinguish between teachers' achievement goals when learning new methods of instruction compared to implementing new teaching practice.

Performance aspects of teachers' goal orientations may be more salient in their own behaviors related to learning (i.e. help-seeking patterns described by Butler, 2007).

Finally, to incorporate interpersonal relationships in teachers' goal orientations, Butler (2012) extended her model to include a measure of relational goals. In this study, she provided evidence in support of the new dimension of teachers' goals and also collected data to investigate students' perceptions related to the teacher's self-report. As in previous studies, the teacher's approach to instruction was assessed with an adapted version of the PALS. The sample size consisted of over 200 teachers and data on teachers' goals and instructional practices were collected at different time-points in the school year. The model among the variables, including Butler's (2012) five dimensions of achievement goals for teaching, indicated that teachers' relational goals were the strongest predictors of social support and mastery oriented instructional practices, even in comparison to teachers' mastery achievement goals. Student perception data was also included as a report on teachers' instruction. As in previous studies (e.g. Deemer, 2004), students' and teachers' reports were weakly correlated. However, teachers' relational goals were more likely to positively predict students' perceptions of support and mastery instruction while teachers' mastery goals negatively predicted students perceptions of performance orientation. Together, these findings show preliminary support for the use of teachers' goal orientations as a measure of their classroom behaviors and for the purpose

of detecting predictable theoretical relationships between teachers' self-efficacy and their goals for teaching.

The Present Study

In sum, the primary purpose of the present study is to investigate a novel area of teacher self-efficacy – in the context of teachers' development of new skills and in relation to teachers' goals for instruction. Henson's (2002) review of literature on teacher self-efficacy suggested the need for more theoretically derived and nested constructs within this area of research and noted the lack of evidence obtained from pre-/post- or experimental interventions regarding teachers' ability perceptions. Although not purposefully controlled for intervention, the present study may provide unique insight to some of these gaps. First, the theoretical relations between teachers' self-efficacy for student-oriented teaching will be compared with existing measures assessing teacher self-efficacy for motivation and engagement. Further, characteristics of the sample, with varying levels of involvement in a continuing professional development program for social studies instruction, will be used to explore patterns in how teachers' rate self-efficacy. Given the primacy of teacher self-efficacy as a predictive variable in research on effective instruction, it is necessary to explore new theoretical pathways that inform the development of teacher self-efficacy. Therefore, the following research questions will guide the investigation and discussion:

1. How do teachers' ratings of self-efficacy for student-oriented teaching (i.e. relevance and ownership) relate to pre-existing measures of teacher self-efficacy for motivation and student engagement?

2. Do teachers' ratings of self-efficacy for student-oriented teaching predict their teaching goals?
3. Do teachers who have completed a Teaching American History professional development program report higher levels of student-oriented teaching self-efficacy than teachers who were unaffiliated or had enrolled, but not yet completed the TAH program?

CHAPTER THREE: METHOD

The Teaching American History Program

Teachers recruited for the sample had varied experience in social studies professional development. Many teachers had some opportunity in association with the Teaching American History (TAH) grant, funded by the department of education (either had applied, enrolled, or completed). Additional social studies teachers, with comparable instructional responsibilities, were recruited to increase the sample size and comparison group of non-TAH teachers. The purpose of the professional development grant was to strengthen teachers' content knowledge and skills in American history and improve student achievement.

The program recruited social studies teachers (including learning specialists responsible for English language learners and special education), who were invited to apply in the spring semester. Teachers completed the program as a cohort beginning with the summer institute and continued in the fall and/or spring semester of the next school year. Although participation levels varied, all teachers completed the same type of core workshops and were required to write primary source activities, reflections on their teaching and student work. Finally, each received feedback from classroom observations during the school year. Over the course of a three year grant, approximately 20% of participating teachers opted out of Saturday workshops during the fall and spring

semester, but the classroom implementation component was required for all teachers during the fall, regardless of their level of participation (see Table 3). The program offered extrinsic benefits for the completion of all course requirements, including free graduate-level credits in history as well as a stipend.

Throughout the course, teachers learned new skills for teaching the social studies curriculum, which are drawn from literature on historical cognition and inquiry (Wineburg, 2001). The content was lead by historians from local universities and expert teachers were selected to model the incorporation of historical thinking skills into existing lessons. In order to encourage teacher practice of historical thinking with students, participating teachers wrote lessons focused on primary source analysis – referred to as primary source activities (PSAs). During summer workshop sessions, a lead teacher modeled the format of PSAs with examples from his own practice. Next, participants worked in grade-level groups during the summer sessions to develop their own new teaching materials. Finally, participating teachers independently practiced these activities in their classrooms. This format of professional development – that is focused on teachers’ continued practice and application of new skills – provides a unique opportunity to examine new subscales of teachers’ self-efficacy in relation to instructional practice and professional development. Table 3 provides an outline of the program administration

Table 3: Teaching American History Program Outline

	Professional Development Activities	Teacher Implementation
Spring Semester (Feb. – May)	Teacher recruitment Orientation	
	Introduction to historical thinking	Grade-level based practice (drafting primary source activities)
Summer (June – August)	40+ hours theme-based history content (e.g.: <i>War and Society</i> , <i>Cultural Change and Innovation</i>) Lead teacher presentations	Feedback provided
Fall Semester (Sept. – Dec.)	* 16 hours theme-based history content	Design and teach a primary source activity Feedback provided Teacher reflection
	* 16 hours theme-based history content	*Design and teach a primary source activity *Feedback provided *Teacher Reflection
Spring Semester (Jan. – April)	Closing Session	Share primary source activities across grade-level groups Reflect on student work

* Denotes optional activity for some teachers

Participants

The sample for this study was recruited from approximately 350 teachers in association with Teaching American History grants awarded to two districts in the Mid-Atlantic region of the United States. The sample included a mix of teachers who had applied to the program, participated in professional development activities for at least one

year, or began a new cohort beginning in the summer of 2013. Demographic data for the sample is presented in Table 4. In total, 83% were female and 17% were male. A majority of the sample was also Caucasian (90%). Teachers were more varied in their teaching experience and instructional responsibilities, with 18% in their first three years, 31% between 4-10 years of experience, 18% between 11-15 years, 19% between 16-24 years, and 13% have been teaching more than 25 years. All teachers had some (if not primary) responsibility for teaching social studies, including English Language Learners and special education students. This sample is specified because of the opportunity to study teacher self-efficacy in the context of a professional development program that continues over a school year.

Table 4: Demographic Data, Comparison of TAH and Non-Complete TAH Teachers

Characteristic	TAH n = 80	Non- Complete TAH n = 61	Total n = 146 (%)
Gender			
Male	18 (22%)	7 (11%)	25 (17%)
Female	62 (78%)	54 (89%)	121 (83%)
Ethnicity			
Caucasian	75 (94%)	53 (87%)	131 (90%)
African American	2 (3%)	2 (3%)	6 (4%)
Asian	2 (3%)	2 (3%)	4 (2.8%)
Hispanic	0 (0%)	4 (7%)	4 (2.8%)
American Indian	1 (1%)	0 (0%)	1 (0.7%)
Other	1 (1%)	2 (3%)	3 (2.0%)
Grade-level			
Elementary	41 (51%)	38 (62%)	84 (57%)
Middle	23 (29%)	13 (21%)	36 (24%)

High	13 (16%)	10 (16%)	23 (16%)
Number of Years Teaching			
1 – 3 Years	6 (8%)	21 (34%)	27 (18%)
4 – 10 Years	25 (31%)	19 (31%)	45 (31%)
11 – 15 Years	18 (23%)	6 (10%)	26 (18%)
16 – 24 Years	17 (21%)	10 (16%)	28 (19%)
25 + Years	13 (16%)	5 (8%)	19 (13%)
Number of Years Teaching			
Social Studies			
1 – 3 Years	13 (16%)	24 (39%)	37 (25%)
4 – 10 Years	26 (33%)	21 (34%)	49 (34%)
11 – 15 Years	15 (19%)	6 (10%)	23 (16%)
16 – 24 Years	16 (20%)	8 (13%)	25 (17%)
25 + Years	6 (8%)	2 (3%)	8 (5%)
Instructional Responsibilities			
Social Studies	80 (100%)	59 (97%)	144 (100%)
Math	38 (46%)	36 (59%)	77 (53%)
Language Arts	43 (54%)	43 (71%)	91 (63%)
Science	34 (43%)	33 (54%)	70 (48%)
Other	11 (14%)	6 (10%)	18 (13%)
Teaching Certification			
Elementary Ed.	41 (51%)	40 (66%)	86 (59%)
Secondary Ed.	35 (44%)	18 (30%)	53 (36%)
English Language Learners	4 (5%)	4 (7%)	9 (6%)
Special Education	6 (8%)	10 (16%)	16 (11%)
Other	2 (3%)	0 (0%)	2 (1.4%)
Community			
Urban	5 (6%)	6 (10%)	13 (9%)
Suburban	68 (85%)	54 (89%)	125 (86%)
Rural	2 (3%)	1 (2%)	3 (1.4%)

TAH teachers. The first subset of the sample is teachers who completed at least one year in the Teaching American History professional development program. These teachers completed at least 40 hours of history content and pedagogical professional development. The hours of professional development were concentrated in one summer,

which focused on primary source analysis centered on an historical theme (e.g. War and Society). During the following school year, teachers were observed and provided feedback on their ability to engage their students (elementary, middle, or high school) in a developmentally appropriate primary source activity. There were 80 teachers who completed at least one full year of professional development among multiple themes that were offered between 2010 and 2012. Similarly, their demographic characteristics varied in proportion to that of the full sample (n = 146, see Table 4).

Non-complete TAH teachers. The comparison group of teachers consisted of teachers who were enrolled in the professional development program before the 2013-2014 school year. These teachers completed the educational ratings questionnaire within the first few days of the program, but prior to completing the full year implementation of their learning in instruction. Further, this group included 17 additional social studies teachers unaffiliated with TAH through snowball sampling. They described their professional development related to social studies to include History Alive training, individual workshops mandated by the school district, Document Based Questions training for English Language Learners, unspecified social studies conferences, workshops offered by the Library of Congress, or none at all. There were 61 teachers in this group whose demographic characteristics varied similarly to the proportions found in the full sample (see Table 4).

Research Design

A quantitative survey design was used to address the research questions. The first two research questions were variable-centered and were addressed using correlation and

statistical regression procedures. Furthermore, although data were collected at one time-point, the sample allowed for some investigation of differences between groups. The comparison group consisted of teachers who had not yet completed any portion of the social studies professional development program and the second group included teachers who had completed at least one year of the program. The yearlong program included summer or daylong workshops, in addition to lesson planning, reflection, and classroom observation during the school year.

Data Collection Procedures

Primarily, data were recruited from teachers who had applied, were currently enrolled, or had completed a cohort of professional development administered by the Teaching American History grant. In order to separate the researcher's role on the grant from data collected for an independent project, application materials and rosters were consulted with permission from the project director and in conjunction with public school websites. Public contact information was used to confirm and develop a recruiting list for the study. All survey materials were distributed by mail, email, or at in-person program meetings. All printed correspondence was distributed on university letterhead and email correspondence was sent from a university email address. The differences in survey distribution (electronic and hard copies) were necessary to follow approved protocol required in area school districts.

Where the survey was available in-person, there was no time set-aside during instruction to allow for the completion of the survey. However, printed copies were available if teachers opted to complete a survey during workshop breaks or between

scheduled workshop dates. Though not required, teachers were invited to return the survey in-person, via interoffice mail, or electronically. Teachers were informed the overall intent of the survey was to explore teacher beliefs about social studies instruction. Further, items on the survey were presented in the following order: general demographic information, instructional responsibilities, confidence ratings, strategies for instruction, and teaching goals. The survey was estimated to be approximately 15-20 minutes for completion and no identifying data were requested.

Data were collected from TAH teachers (including completers and non-completers) between May and July 2013. Upon approval of the project, the survey and letters of invitation were mailed to teachers who had formerly participated or applied to participate in the TAH program between 2010-2013. Teachers who were registered for the 2013 summer program were invited to participate in the research during in-person workshops. For these teachers, data were accepted through the first week of program professional development. Therefore, these “in-progress” participants had some initial exposure to program content and course goals. In total, data collection during these months yielded a response rate of approximately 37% with 129 surveys returned.

Following initial data collection, additional social studies teachers were recruited via snowball sampling. The purpose was to validate the researcher-developed scale measuring teachers’ self-efficacy for student-oriented teaching and also to increase the heterogeneity of the sample for TAH comparison groups. Teachers in the initial sample were re-contacted and asked to forward the survey to colleagues responsible for social studies instruction. Approval was also granted to recruit teachers from university

programs within the College of Education and Human Development. It is not possible to calculate a response rate for the extended sample because snowball sampling is not traceable. However, 17 surveys were returned from this distribution.

Measures

Descriptive data. The first 16 items on the survey addressed general demographic information, instructional responsibilities, and professional development experience. Participants were asked to indicate their gender, age, race, the number of years they have been teaching, and more specifically, the number of years they have taught social studies. Grade-level was requested as elementary, middle, or high school. Additionally, the target sample includes elementary teachers. Therefore, participants were asked to specify the subjects taught and their instructional certifications. To gather information about classroom context, participants estimated the total number of students they teach, the number who are English Language Learners, who receive English as a Second Language Services, and students with Individual Education Plans (IEPs). Finally, in order to distinguish between groups of teachers related to professional development, the last few items asked participants to identify the years they completed TAH or describe other professional development coursework.

Self-efficacy for motivation (Dellinger et al., 2008). Three items were incorporated from Dellinger et al. (2008) that assessed teacher's self-efficacy for motivating students ($\alpha = .76$). These items made up one subscale in Dellinger et al.'s (2008) TEBS-Self measure, which included a total of thirty-one items on seven subscales. In the present study, teachers were asked to rate beliefs in their capabilities on a 4-point

scale anchored at 1 – weak beliefs to 4 – very strong belief (see *Appendix A* for scale items). On this measurement, the researchers indicated the use of a 4-point scale because their prior research on teacher self-efficacy found that teachers generally only used the last four points on a ten-point scale.

Self-efficacy for student engagement (Tschannen-Moran & Hoy, 2001). The self-efficacy for student engagement subscale is one of three subscales written to assess teachers' general sense of efficacy. Items assessing self-efficacy for student engagement, classroom management, and instructional strategies comprise the full Teacher Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001), which includes 24-items on the long form and 12-items on the short form. To reduce the length of the full survey, four items assessing teacher self-efficacy for student engagement were used from the short form of the Teacher Sense of Efficacy Scale (see *Appendix A*). Teachers rated their beliefs on a 10-point scale ($\alpha = .83$) (ranging from 10% - 100%). These items were adapted from the original 9-point scale in order to align with additional measures of self-efficacy included in the study. Sample items on this scale assess how much teachers can do to “help your students value learning,” or “help your students think critically.” Teachers were asked to rate a percentage indicating the degree of certainty with which they believed they could accomplish the specified tasks. The researchers designed the scale based on recommendations purported by Bandura in the social cognitive model for studying self-efficacy beliefs.

Self-efficacy for student-oriented teaching (Kilday & Lenser, 2012). These scales were developed for this study and include 14-items on two subscales. Ratings are

addressed following Bandura's (2006) guidelines to assess the strength of self-efficacy beliefs on ten-point scale. Teachers were asked to rate a percentage indicating the degree of certainty in which they believed they could make content knowledge relevant (7 items) and support students' ownership of learning (7 items). Teachers were prompted in consideration of their present teaching situation to rate a percentage of how certain they were that they could do each of the following, with the option to select values ranging from 10% to 100% for each task.

Fostering relevance. The development of these seven items was informed by literature on students' autonomy in self-determined learning (see Ryan & Deci, 2000) and value components of the expectancy-value theory (see Wigfield & Eccles, 2000). Sample items on this sub-scale include: "Provide a rationale to make academic tasks relevant," and "Help students recognize how classroom material has value for reaching future personal goals." In an initial pilot test of the scale, reliability was obtained at $\alpha = .68$. Therefore, items on the scale have been added and revised to continue its development (see *Appendix A*).

Supporting students' ownership of learning. Similar to the items above, the seven items on this scale were developed for this study and informed by literature on different components of students' autonomy support (see Ryan & Deci, 2000) and self-regulated learning (Zimmerman, 2002). Also measured on a ten-point scale, teachers were asked to rate a percentage for which they believed they could "help students identify methods to monitor their own classroom performance," and "create opportunities for

students to make choices about their learning.” Initial pilot tests showed an acceptable coefficient alpha ($\alpha = .77$) and minor revisions have been incorporated (see *Appendix A*).

Teaching goal orientations (Butler, 2012). Teachers’ goal orientations were assessed using the scales developed from Butler’s (2007) research on achievement motivation for teaching. Items in four of the sub-scales open with, “I would feel that I had a successful day in school if...” and measure teachers’ mastery goals (i.e. “I saw that I was developing as a teacher and teaching more effectively than in the past; $\alpha = .67$), ability-approach goals (i.e. “my classes did better on a an exam than those of other teachers;” $\alpha = .79$), ability avoidance-goals (i.e. “no one asked a question in class that I couldn’t answer” $\alpha = .65$), and work-avoidance goals (i.e. “some of my classes were cancelled” $\alpha = .76$). Furthermore in order to assess teachers’ student-oriented instructional goals, items from Butler’s (2012) extended scale incorporating relational goals (i.e. “As a teacher, building relationships with students is most important for me;” $\alpha = .90$) were included in the measure. All 20 items on the scale (see *Appendix A*) were rated on a five-point scale ranging from 1 (totally disagree) to 5 (totally agree).

CHAPTER FOUR: RESULTS

To investigate the relationships among the variables and the differences in teachers' self-efficacy between groups, the primary statistical analysis included Pearson correlations, regression, and analysis of variance. The descriptive statistics (means, range, standard deviations, and distribution shapes) for all measures included in the study are reported in Table 5. The mean for teachers' student-oriented teaching self-efficacy was 82.5 with a standard deviation of 10.6. The skewness statistic $-.29$ indicates that it was approximately normally distributed. Overall, teachers' reported their mean self-efficacy on all three scales (self-efficacy for student-oriented teaching, engagement, and motivation) relatively high. Means for teachers' SE-SOT and SE-engagement were within one-point of one another, though the range on teachers' ratings was slightly higher for their self-efficacy for engagement.

Histograms were examined for each quantitative variable to assess the distribution of scores. Teachers' ratings for each of the three self-efficacy measures, as well as mastery, approach, and relational goals were negatively skewed, indicating that teachers' ratings were more concentrated on the higher ends of the scales. In contrast, the avoidance constructs measuring teaching goal orientations were positively skewed. Kurtosis statistics (see Table 5) show that the shape of the distribution for teachers' work avoidance orientation was the most leptokurtic (scores on this variable had the highest

peak), while ratings for mastery goal orientations were closest to the shape of a curve for a normal distribution. The curves that were platykurtic included teachers' self-efficacy for student-oriented teaching, self-efficacy for motivation, mastery goals, and ability approach goals, which suggests that scores were moderately varied from the mean. Box and whiskers plots were also examined by groups of teachers, including subjects teaching, years teaching experience, and experience in TAH to locate any extreme outliers or impossible scores. No extreme outliers were removed based on univariate data screening, but two teachers who indicated that they did not teach social studies were excluded from the remaining analysis.

Table 5: Descriptive Statistics of Variables Measured For All Teachers

Variable	<i>n</i>	Range	M	SD	Skew	SE	Kurtosis	SE
SE-SOT	134	42	82.5	10.6	-.29	.20	-.76	.42
SE-Engagement	139	50	83.2	11.0	-.58	.20	.08	.41
SE-Motivation	144	1.67	3.56	.44	-.49	.20	-.98	.40
Mastery Goals	143	1.75	4.54	.44	-.82	.20	-.02	.40
Ability Approach	143	4.0	3.32	.98	-.18	.20	-.57	.40
Ability Avoidance	141	4.0	2.58	.80	.37	.20	.18	.40
Work Avoidance	142	3.0	1.63	.71	1.3	.20	1.3	.40
Relational goals	141	4.0	3.97	.89	-.86	.20	.28	.40

Factor Analysis

Prior to running analysis for each of the proposed research questions, it was necessary to assess the dimensionality of teachers' self-efficacy for student-oriented teaching to determine its utility for the intended analysis. It was hypothesized that two factors would account for teachers' self-efficacy: (a) relevance and (b) ownership.

Therefore, a principal axis factor analysis using varimax rotation was performed on these 14 items. The correlation matrix revealed moderate correlations ranging from .41 to .73 and only one factor was extracted to explain 55% of the variance in the items. Examining the communalities, four items were eliminated that explained less than 50% of variance for the extracted factor. These items included: “Help students make personal connections to the content I teach,” “Create opportunities for students to make choices about their learning,” “Create a learning environment that encourages independent thinking,” and “Provide opportunities for students to set their own learning goals.” The resulting factor solution explained approximately 58% of the variance in the items with factor loadings ranging from .72 - .83 (Table 6). These 10 items were averaged to create a composite score for teachers’ self efficacy for student-oriented teaching (SE-SOT) in the remaining analysis (see *Appendix B*). The final scale holds together well, with a reliability obtained at $\alpha = .93$.

Table 6: Principle Axis Factor Analysis for Student-Oriented Teaching Self-Efficacy

Item (abbreviated)	Factor Loading
1. Present content that students relate to other subjects	.75
2. Provide a rationale to make academic tasks relevant	.73
3. Recognize students' thoughts in my explanation of learning tasks	.72
4. Help students recognize how material has value for reaching personal goals	.83
5. Help students recognize how material has value for learning	.72
6. Create authentic learning opportunities to make knowledge relevant	.84
7. Help students appropriately monitor their own performance	.75
8. Help students identify strategies to support their own learning	.83
9. Model strategies that students can use in other classes beyond the academic year	.75
10. Assist struggling students in identifying strategies to support their own learning	.73
Sum of squared loadings	5.83
% explained variance	58.29%

Correlations for Teachers' Self-efficacy for Student-Oriented Teaching

The first research question was to investigate the relationship between Teachers' Self-efficacy for Student-oriented teaching and their self-efficacy for motivation and engagement. In doing so, the validity of teachers' student-oriented teaching self-efficacy can be surmised in comparison to well-validated measures. Therefore, correlations to self-efficacy for motivation and engagement were considered following the confirmation of the one-factor model for student-oriented teaching. Scatterplots were examined for all pairs of variables included in the study to confirm linear relationships and to detect bivariate outliers that would affect the strength of Pearson's correlation. The bivariate

scatterplots revealed three outliers at the lower end of the scale for teachers' ratings on self-efficacy for student-oriented teaching. Removal of the outliers did not significantly affect the strength of the correlations, but when removed, correlations between teachers' self-efficacy for student-oriented teaching and their relational and work avoidance goals became significant at $r(128) = -.19$, $p = .03$ for work avoidance goals, and $r(127) = .22$, $p = .013$ for relational teaching goals. Therefore, after removing these outliers, the data representing the correlations among all variables included in the study are presented in Table 7.

Table 7: Summary of Intercorrelations Among the Measures

Measure	1	2	3	4	5	6	7	8
1. SE-SOT	--	.79**	.61**	.41**	-.02	-.07	-.19*	.22*
2. SE-Engagement		--	.55**	.32**	-.006	-.01	-.11	.27**
3. SE-Motivation			--	.26**	.06	-.10	-.18*	.15
4. Mastery Goals				---	-.004	-.05	-.19*	.33**
5. Performance Approach					---	.56**	.36**	.13
6. Performance Avoidance						---	.58**	.10
7. Work Avoidance							---	-.03
8. Relational Goals								---

Note. SE = self-efficacy; SOT = student-oriented teaching

* $p < .05$. ** $p < .01$

As hypothesized, teachers' self-efficacy for student-oriented teaching is positively and significantly related to their ratings of self-efficacy on existing measures for motivation and engagement. In the two-tailed significance tests, the correlation between

teachers' self-efficacy for student-oriented teaching and engagement was the strongest, where $r(130) = +.79$, $p < .001$ and r^2 indicates that 62% of the variance in teachers' ratings on SE-SOT can be predicted by their scores on self-efficacy for engagement. There is also a moderate relationship between SE-SOT and teachers' ratings of self-efficacy for motivation where 37% of the variance in teachers' ratings can be explained by the variance in teachers' self-efficacy for student-oriented teaching, $r(132) = +.61$, $p < .001$. These results support the convergent validity of teachers' self-efficacy for student-oriented teaching.

Teachers' Self-efficacy for Student-oriented Teaching and Teaching Goals

The second research question investigated if teachers' self-efficacy for student-oriented teaching could predict teachers' goal orientations. Therefore, a linear regression was used to examine the predictive and divergent validity of SE-SOT, as well as consider theoretical implications specific to teacher motivation. In line with the conceptual framework with self-efficacy beliefs preceding goal orientations, teaching goals were predicted from teachers' student-oriented teaching self-efficacy beliefs. As the summary of intercorrelations (Table 7) indicates, the relationship between teachers' mastery goals and teachers' self-efficacy for student-oriented teaching is statistically significant, $r(130) = +.41$, $p < .001$. A regression was performed to obtain the line of best fit that predicts mastery-teaching goals from self-efficacy for student-oriented teaching. The regression equation for this prediction was $Y' = 3.13 + (.02 \times \text{SE-SOT})$, where $F(130) = 26.2$, $p < .001$. The 95% confidence interval suggests that as teachers' self-efficacy for student-oriented teaching increases by one unit on a 100-point scale, their mastery goals also

increase between .01 and .02 on a five-point scale and R^2 indicates that 17% of the variance in teachers' mastery goals can be predicted from their student-oriented teaching self-efficacy. The scatterplot in Figure 1 illustrates the positive linear relationship between the variables. This relationship between student-oriented teacher self-efficacy and mastery teaching goals also replicates findings from Cho and Shim's (2013) research, which found a significant correlation ($r = .33$) between teachers' general sense of efficacy and their teaching goals.



Figure 1: Scatterplot Illustrating the Relationship Between Teachers' Self-efficacy for Student-oriented Teaching and Their Mastery Goals

Although the regression equation that predicted teachers' mastery goal orientation was the strongest, there were also significant correlations between teachers' self-efficacy for student-oriented teaching and their work avoidance and relational goals. Therefore, their regression statistics are also included in Table 8. The regression equation predicting teachers' work avoidance goals was negative, $Y' = 2.7 + (-.013 \times \text{SE-SOT})$, where $F(128) = 4.91$, $p = .03$. This regression indicates that as teachers' self-efficacy for student-oriented teaching increased, their work avoidance goals decreased. In this model, R^2 was

relatively low, explaining only 3.7 % of the variance in teachers' work avoidance goals from SE-SOT. In contrast to teachers' avoidance goals, the regression equation predicting teachers' relational goals was positive $Y' = 2.5 + (.02 \times \text{SE-SOT})$, where $F(127) = 6.31$, $p = .01$ and 4.7% of the variance was explained. The scatterplots depicting each of these relationships appear in Figure 2 and Figure 3, respectively. Overall, these data followed expected patterns. Student-oriented teaching self-efficacy negatively predicted teachers' work avoidance goals while positively predicting their relational goals. Accordingly, these lend additional support to the predictive validity of the measure.

Finally, there were no significant relationships between SE-SOT and teachers' performance approach or avoidance goals. Rather, performance approach and avoidance goals were significantly related to one another. Additional research has found similar ambiguity regarding the assumptions about teachers' performance goals (Butler, 2012; Retelsdorf et al., 2010); therefore it is not surprising that no significant predictability was detected.

Table 8: Linear Regression Predicting Teachers' Achievement Goals for Teaching From Self-efficacy for Student-Oriented Teaching

Predictor	Mastery Goals		Work Avoidance Goals		Relational Goals	
	β	95% CI	β	95% CI	β	95% CI
SE-SOT	.41	[.01, .02]	-.19	[-.02, -.001]	.22	[0.0, .03]
F	26.3**		2.14*		6.31*	
R ²	.17		.037		.047	

Note. * $p < .05$. ** $p < .01$

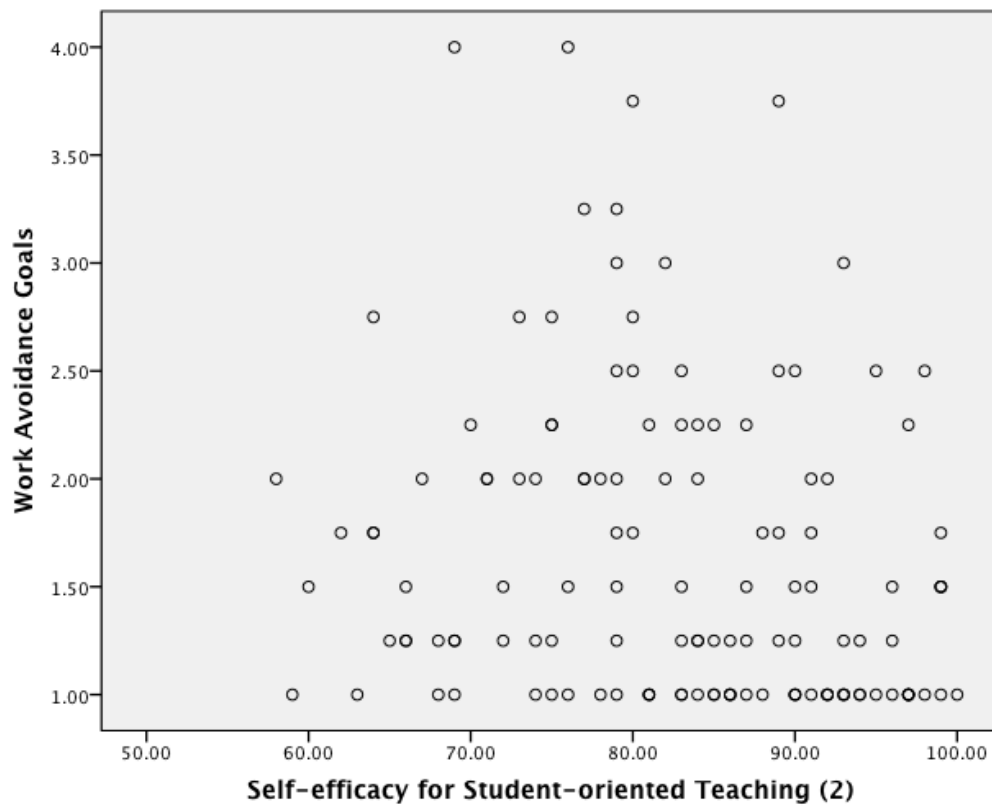


Figure 2: Scatterplot Illustrating the Relationship Between Teachers' Self-efficacy for Student-oriented Teaching and Their Work Avoidance Goals

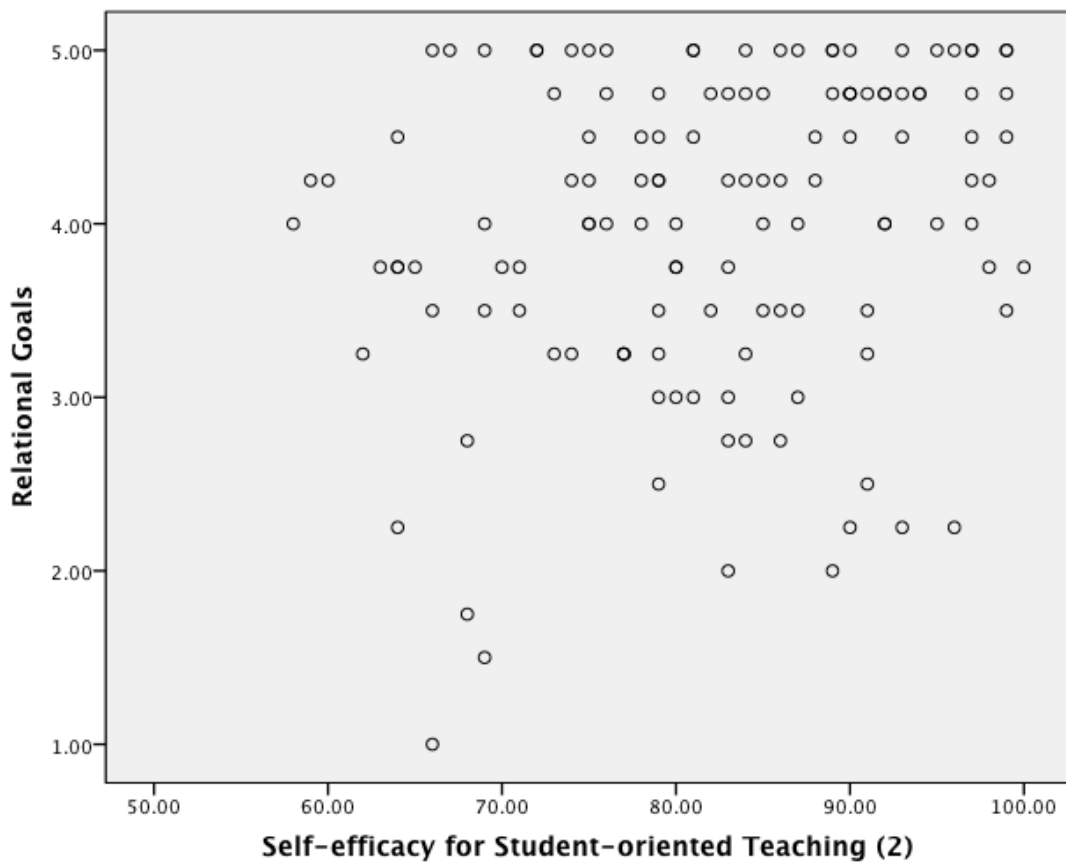


Figure 3: Scatterplot Illustrating the Relationship Between Teachers' Self-efficacy for Student-oriented Teaching and Their Relational Goals

Group Differences for Teachers' Self-efficacy for Student-oriented Teaching

The final research question investigated group differences in teachers' self-efficacy for student-oriented teaching based on their professional development experience in a Teaching American History program. Given the context of the sample, drawn from teachers associated with a program designed to enhance teachers' pedagogical content knowledge, it is relevant to investigate patterns in SE-SOT related to this professional experience. To summarize teachers' overall self-efficacy for student-

oriented teaching in a diverse sample, means and standard deviations are reported in Table 9 for distinct subsections of the sample. Teachers' rated their student-oriented teaching self-efficacy slightly higher in the group based on professional development experience in the Teaching American History program. There is also a clear pattern in teachers' ratings based on years of teaching experience, with steady increases in student-oriented teaching self-efficacy as teachers gain more experience in their field.

Table 9: Descriptive Statistics of Teachers' Self-efficacy for Student-oriented Teaching by TAH and Teaching Experience

Teaching Experience	TAH			Non-complete TAH			Full Sample		
	<i>n</i>	M	SD	<i>n</i>	M	SD	<i>n</i>	M	SD
1- 3 Years	6	81.2	11.5	17	78.3	10.5	23	79.0	10.6
4-10 Years	22	80.3	9.8	18	78.8	10.7	41	79.6	10.0
11-15 Years	18	84.6	9.9	5	79.6	16.5	25	83.4	10.9
16-24 Years	16	85.9	9.1	10	86.3	12.3	26	86.0	10.2
25+ Years	12	86.9	9.4	5	88.8	11.7	18	87.6	9.5
All Levels	75	83.5	9.8	55	80.9	11.8	134	82.5	10.6

To test whether group means differed significantly based on teachers' participation in a professional development program for Teaching American History, an independent samples t-test was performed. The assumption of homogeneity of variance was met $F = 3.56$, $p = .06$, indicating that variance in each of the two samples were approximately equal. Given the low differences in means between the two groups, where TAH teachers reported a higher self-efficacy ($M = 83.6$) by only 2.6 points compared to

non-completing TAH teachers ($M = 81.0$), it was not surprising that the t-test was non-significant, $t(128) = -1.74$, $p = .18$.

Exploratory Analysis. Because self-efficacy ratings are highly dependent on mastery experiences, additional analyses were conducted based on teachers' years of experience teaching. Categorically, teachers reported their teaching experience in five groups, between 1-3 years, 4-10 years, 11-15 years, 16-24 years, and 25+ years of experience. To assess group differences on teachers' ratings of student-oriented teaching self-efficacy, an analysis of variance was performed on these five groups. First, the assumption of equal variance using the Levene test for homogeneity of variance was met, $F(4, 128) = .23$, $p = .92$. The ANOVA showed that the overall model was statistically significant $F(4, 128) = 3.30$, $p = .01$, suggesting that there were significant differences in teachers' levels of SE-SOT based on the number of years they have been teaching. The eta squared statistic indicated that 9.3% of the variance in teachers' ratings of student-oriented teaching self-efficacy can be explained by years of teaching experience, $\eta^2 = .09$, which according to Cohen's (1988) guidelines, is a medium effect size. The results from the ANOVA are presented in Table 10.

Table 10: Analysis of Variance for Teachers' Self-efficacy for Student-oriented Teaching by Years of Teaching Experience

Group	<i>n</i>	M	SD	F	<i>df</i>	<i>p</i>	η^2
1-3 Years	23	79.0	10.6	3.3	132	.01	.09
4-10 Years	41	79.8	10.1				
11-15 Years	25	83.4	11.0				
16-24 Years	26	86.0	10.2				
25+ Years	18	87.6	9.5				

Least significant differences post hoc tests were requested to identify significant differences between subgroups. These tests found four pairwise comparisons to be statistically significant. Teachers with 1-3 years of experience reported significantly lower levels of self-efficacy for student-oriented teaching ($M = 79.0$) than teachers with 16-24 years ($M = 86.0$, difference = 6.99) or 25+ years ($M = 87.6$, difference = 8.56) of teaching experience. The effect sizes for these differences were calculated to be $d = .68$ and $d = .83$, respectively, which are large effect sizes according to Cohen's (1988) classifications.

The same patterns were maintained between teachers with 4-10 ($M = 79.8$) years of experience, who reported significantly lower levels of self-efficacy than teachers with over 16-24 ($M = 86$, difference = 6.23) and 25+ years ($M = 87.6$, difference = 7.8) of experience. The effect sizes for these differences are also large, where $d = .61$ in the first comparison and $d = .76$ for the second comparison. However, when the Tukey HSD is

used to limit the risk of Type I error for unplanned Post hoc comparisons, each pairwise comparison becomes non-significant.

Finally, although no significant mean differences between TAH and non-complete TAH teachers were found, comparable research in teacher self-efficacy has found that measures of central tendency mask differences in teachers' ratings (Tschannen-Moran & McMaster, 2009). Therefore, Table 9 includes a breakdown of teachers' ratings considering both career span and professional development experience. The patterns in teachers' mean levels of SE-SOT illustrate that differences between TAH and non-complete TAH teachers are slightly more visible when split by career span differences. Teachers unassociated with the professional development program at mid-career (between 11 and 15 years of experience) reported their level of SE-SOT with largest standard deviation. This measure suggests that there was more variability and a wider range of confidence levels among teachers in this particular sect of the sample. The consistent patterns of means and standard deviations that is consistent across years of teaching experience suggests that teachers' mean SE-SOT would be more variable in the population of social studies teachers unaffiliated with the professional development program. Whereas teachers who had completed the professional development program seemed to have more stable reports of their student-oriented teaching self-efficacy, regardless of teaching experience, as implied by the tighter standard deviations around the mean.

CHAPTER FIVE: DISCUSSION

The purpose of this study was to examine a new measure of teacher self-efficacy in relation to existing measures, as well as teachers' professional experience. Research on classroom goal structures and the classroom social climate has found theoretical convergence between teachers' mastery instructional practices, levels of emotional and academic support, and students' perceptions of teacher support (Patrick et al., 2011; Turner, Gray, Anderman, Dawson & Anderman, 2013). These affirm the importance of the social environment and teacher-student interactions in the development of students' motivation, engagement, and achievement. Although the purpose of this research is to capture which levels or combinations of variables (e.g. mastery instructional practices, teacher support, peer support, respect) explain the variance associated with achievement outcomes and students' perceptions of the classroom environment, there is less information about what precedes the emergence of such classroom climates – including individual differences in teacher motivation. Such factors are important to consider given the teacher's role in establishing the learning environment. As Patrick, Ryan, and Kaplan (2007) found in their study of students' perceptions of the classroom climate, student motivation (measured by mastery goal orientations and academic self-efficacy) mediates levels of student engagement in relation to the teacher's academic and social support. Likewise, capturing teacher self-efficacy for student-oriented teaching may capture

teacher perceptions of their own agency for engaging students when given specific teacher-student interactions that contribute to the learning context.

Teacher Self-efficacy

From this sample of TAH and non-complete TAH teachers, teachers' self-efficacy for student-oriented teaching was related to their self-efficacy for motivation and engagement. This lends support for the measurement of student-oriented teaching as a construct of teacher self-efficacy beliefs. The items that assessed teachers' self-efficacy for motivation and engagement from the existing measures did overlap in some ways. For example, Tschannen-Moran and Hoy's (2001) short form of self-efficacy for student engagement includes one item on teachers' ability to "motivate students who show low interest in schoolwork," while Dellinger et al.'s (2008) scale measures teachers' ability to "provide a positive influence on the academic development of students," and "maintain an environment in which students work cooperatively." Each generally assesses teachers' perceptions of their ability to have a positive affect on student learning.

In contrast, though highly related to teachers' self-efficacy for student engagement ($r = .79$), the SE-SOT scale measures instructional strategies that have been linked to student motivation and engagement rather than perceptions of such.

Additionally, there was a weaker (though still moderate) correlation between teachers' self-efficacy for student-oriented teaching and their self-efficacy for motivation ($r = .61$), which may be explained by the difference in item stems. The motivation scale, adopted from Dellinger et al. (2008), asked teachers to assess their self-efficacy based on their present teaching situation. This may place more emphasis on classroom context than

teachers' cumulative mastery teaching experiences. The slight differences in correlations to these measures indicate that SE-SOT more closely aligns with how Tschannen-Moran and Hoy (2001) assessed teachers' sense of self-efficacy for engagement in their widely accepted measure.

With such high correlations, it will be important for future research to clarify the unique contributions of each measure to more accurately explain the variance in teacher self-efficacy beliefs as they relate to their classroom interactions and students' motivation and engagement outcomes. Items assessing teachers' self-efficacy for student-oriented teaching were distinct from current measures in important ways. Primarily, they were derived from literature on autonomy support and self-regulation. The factor analysis revealed that teachers did not perceive these as separate constructs. Although they are theoretically distinct, they do not operate independently from one another. Therefore, helping students to monitor their own performance, modeling learning strategies, providing a rationale, and helping students recognize how material has value for their learning (for example) each explained variance within the same latent construct.

Furthermore, in the present analysis, four items were eliminated from the initial scale based on low communalities in order to obtain a more parsimonious solution. These particular items were reported with the highest and lowest means for teachers' self-efficacy. If the scale were used in a sample of in-service or pre-service teachers who received more explicit instruction related to theories of autonomy and self-regulation, researchers may consider retaining all items in order to detect differences in a contrasting sample.

Regardless of the theoretical distinctions among the self-efficacy measures, many items measuring teachers' student-oriented teaching self-efficacy differ from the traditional teacher self-efficacy scales by emphasizing a sense of collaborative efficacy, as Wheatley (2005) refers, in which teachers and students share responsibility for learning. For example, items ask teachers to consider the extent to which they can "help students recognize how classroom material has value for their learning," or "present content that students relate to other subjects." Framed in this manner, teachers must consider not only their own efficacy for implementing a strategy, but also to what extent they believe students will reciprocate by making their own connections between classwork and other subjects of interest.

Additional speculations regarding the unexpected one factor model may be deduced from the regression analyses predicting teachers' achievement goals. The relationship between SE-SOT and teachers relational goals was significant, but less so than that between self-efficacy for engagement and relational goals. This distinction points to a slight dissimilarity between the two scales, which warrants further theoretical investigation. A closer comparison of the items suggests, for example, teachers who believe that they can "get students to do well in social studies school work" (Tschannen-Moran & Hoy, 2001) may consider emotional support an important factor in school success and therefore seek to establish positive relationships. Providing a rationale for instruction, however, is not necessarily an affective component of engagement.

Moreover, since the development of Tschannen-Moran and Hoy's 2001 subscale of teachers' self-efficacy to engage students, the conceptual definition of student

engagement has become more complex, including components for behavioral, emotional, and cognitive engagement (Appleton, Christenson, & Furlong, 2008). Therefore, teachers' student-oriented teaching self-efficacy may be an extension of teachers' ability to engage students by measuring what Appleton et al. (2008) point to as cognitive and psychological engagement, which, in their review, more closely align with self-regulation and autonomy. Continuing the development of the measure for student-oriented teaching among career teachers, it would be beneficial to include additional items that assess the multidimensionality of student-oriented teaching to include behavioral, cognitive, and affective components. Then, following the patterns in relationships to teachers' goals for teaching, perhaps teacher self-efficacy for emotional engagement would best predict relational goals for teaching while teacher self-efficacy for cognitive engagement would predict mastery teaching goals.

Further, a qualitative elaboration of what teachers consider when providing ratings on this scale may provide more information to compare teachers' individual calibration of their self-efficacy beliefs. Adding a qualitative component that is collected from multiple perspectives (e.g. teachers at various career stages or professional development programs) would contribute to the field's understanding of what criteria teachers' consider when judging their mastery on these skills. Although the items are derived from theories of self-regulation and autonomy in students' achievement motivation, teachers may likely perceive these items independent from the theory. Developing the scale around teachers' perceptions would better define the one factor model.

Teacher Professional Development

Although it was hypothesized that teachers' ability to foster relevance would be associated with their participation in a Teaching American History professional development program, the results were reported on a composite scale. This suggests that the items on the survey did not directly measure skills learned in the professional development program. A more direct assessment would have assessed domain-specific instructional strategies (e.g.: I can encourage students to consider source or audience in their interpretation of evidence) rather than implicitly consider a domain-specific context. However, the advantage to present approach is the ability of SE-SOT to be used across academic domains, which would vary by teachers' interpretation of what constitutes student-oriented teaching in their domain.

In the one factor model, teachers' self-efficacy for student-oriented teaching followed expected patterns for measuring teacher self-efficacy. However, the sample was not distinguishable based on teacher professional development. Given the convergence of the subscales measuring teachers' ability to foster relevance and support students' ownership of their learning, it is not surprising that no significant differences were found between teachers' mean levels of student-oriented teaching self-efficacy based on professional development. In their experimental research regarding teacher self-efficacy in professional development treatment groups, Tschannen-Moran and Hoy (2009) found that the development of teacher self-efficacy does not follow a straightforward linear pattern. Given the scale was not explicitly related to the professional development, patterns emerged more similarly to Tschannen-Moran and McMaster's (2009) finding

that teachers' levels of self-efficacy increased over time when measured by years of teaching experience.

In order to more accurately explore the intra-individual development of student-oriented teaching self-efficacy, an experimental design in which teachers are explicitly taught strategies for autonomy support and self-regulation would provide more information for the development of the construct. Teachers who have not been exposed to new teaching strategies may report higher levels of self-efficacy, which may subsequently drop and recalibrate after the introduction of new strategies for instruction (Tschannen-Moran & McMaster, 2009). Therefore, comparing groups of teachers associated and unassociated with a particular professional development program may mask differences in self-efficacy based on teachers' professional development. Teachers in these groups would be more likely to self-report their confidence based on different criteria for mastery. Therefore, a repeated measures design with multiple points of data collection would be necessary to detect a drop and recalibration of teachers' self-efficacy ratings.

Limitations

There are several limitations to consider in the interpretation of the results presented. Primarily, the sample for the research was selected by convenience. The limited time in which to conduct the study did not permit a true experimental design. Further, given that a large majority of the sample were recruited from a pre-existing professional development program, it is likely that teachers who were more willing to enroll in the yearlong program were also those who were more mastery-oriented and

highly self-efficacious compared to their colleagues who did not actively seek professional development. Corroborating this notion, de Vries, van de Grift, and Jansen (2013) found that teachers who were clustered high on continuing professional development activities (updating, collaborating, and reflecting on teaching strategies) also held more student-oriented beliefs about instruction, while their subject-matter beliefs about instruction did not vary across groups.

Considering this pattern, although the teachers in the comparison groups had not completed the professional development course, they were committed to the program – with knowledge of its goals, structure, and requirements. While the TAH program did offer extrinsic benefits for teachers who completed all of the program requirements, the coursework also included summer intensive workshops, classroom implementation, reflection, and feedback. If teachers were interested only in the re-licensure credits, there may be less extensive online modules that offer comparable extrinsic benefits. Therefore, in order to increase the variability of the sample, additional teachers would have been invited to participate at random from schools in the same district as those enrolled in TAH.

Additional limitations stemmed from the data collection methods. Both the response rate and teachers' individual ratings were subject to bias. The total response rate was much lower for teachers who were recruited outside of the TAH program and for those who applied, yet never enrolled. Further, individual survey ratings were subject to teacher self-report bias, as is commonly a concern for research regarding teacher beliefs. There were also variations in survey format for teachers choosing to participate in the

research. Due to restrictions imposed within participating school districts, some teachers were invited to complete a paper copy of the survey while others submitted their responses online. The difference in format may have also impacted teacher ratings. For example, teachers who were more likely to skip items or leave sections blank had submitted an electronic version of the survey.

Educational Implications

Despite these limitations, the findings from this study have important implications for teacher self-efficacy research and the professional development of career teachers. Current measures of teacher self-efficacy are used as global indicators of teachers' confidence in their profession, most commonly for instructional strategies, classroom management, and student engagement (Tschannen-Moran & Hoy, 2001). Beyond initial licensure, teachers are expected to continue professional development throughout their career to adapt their instruction based on current research and best practices in their domain (de Vries, et al., 2013). Yet teacher self-efficacy, one of the most widely used measures of teacher motivation, does not reflect the expectations for teachers to facilitate a more democratic environment in which responsibility for learning is distributed between teacher and student.

The findings from this research confirm the trends in the development of teacher self-efficacy. That is, teachers early in their careers are more likely to report lower levels of self-efficacy for student-oriented teaching. Professional development programs, attentive to these patterns, may consider recruiting primarily from teachers who have at least ten years of experience in their domain. At mid-career, teachers have had

cumulative mastery experiences to calibrate their beliefs and also begin actively seeking opportunities to experiment with new teaching methods (Richter et al., 2011). The standard deviations around the mean of teachers' self-efficacy for student-oriented teaching indicate that teachers in the mid-to-late stages of their career are more variable in their self-efficacy – a range that is even more pronounced among teachers who did not participate in the Teaching American History professional development program.

Further, with the expectation that teachers continue to advance their professional knowledge, school districts would benefit from the development of self-efficacy measures with predictive validity for instruction. As curriculum reform moves toward strategies to facilitate student inquiry, it would be useful to assess whether teachers feel confident in their ability to orient instructional interactions toward students. Periods of teacher training may prompt a re-evaluation of self-efficacy for these instructional tasks that may not be detected via current self-efficacy assessments.

Finally, the predictive nature of teacher self-efficacy may suggest that professional development can help teachers adapt their own teaching goals as they gain confidence related to teaching in their domain. Teachers' mastery and relational instructional goals have been linked to student perceptions of supportive classroom environments and cognitive engagement (Butler, 2012). Further, Cho and Shim (2013) found that teachers' with a higher sense of efficacy are less susceptible to school contextual influences on their teaching goals (e.g. if the school climate is more performance-oriented). Assessing more specific instructional strategies such as teachers' student-oriented teaching self-efficacy may provide more information to school district

administrators who seek to increase teachers' self-efficacy as a means to affect change in their instructional practices.

Conclusions

The findings from the current study lend support for validity of SE-SOT based on the expected relationships with previously established scales of teacher self-efficacy. These findings indicate the potential of the SE-SOT to measure a component of teacher self-efficacy that derives from literature describing more specific teacher behaviors associated with positive student learning and engagement outcomes. By focusing on student-oriented teacher self-efficacy, the current scale maintains the potential to explore a gap between teachers' beliefs and students' perception of the classroom environment. The scale focuses on skill specificity, such as providing a rationale to facilitate relevance and helping students form personal connections to the material. The current scale distinguishes from existing measures of teacher self-efficacy by reducing the extent to which teachers may interpret the items differently.

In congruence with curriculum reform for student-centered inquiry, using the lens of teacher self-efficacy for student-oriented teaching provides unique insight into the relationship between teachers' educational beliefs and instructional practices that support students' motivation and engagement. Further, given patterns found in teachers' ratings of self-efficacy between novice and experienced teachers, it may be useful in identifying teacher characteristics that are more receptive to different types of content professional development programs. Continuing the development of the construct, additional research using a quasi-experimental design would provide more information regarding the

development or changes in teachers' self-efficacy as it relates to their perceived ability for student-oriented approaches to instruction. Overall, the findings from the current study posit that teacher self-efficacy research should begin to view the construct through an innovative lens; one more aligned with research on autonomy support and classroom goal structures. Such a scale responds to Wheatley's (2005) review that argues in favor of teacher self-efficacy reform and has the potential to explore new theoretical pathways in this area of research.

APPENDIX A: MEASURES

Self-efficacy for Motivation (Dellinger, et. al, 2008)

Right now in my present teaching situation, the strength of my personal capabilities to...

1. Motivate students to perform to their fullest potential in social studies.
2. Provide a positive influence on the academic development of students in social studies.
3. Maintain an environment in my social studies class in which students work cooperatively.

Self-efficacy for Student Engagement (Tschannen-Moran & Hoy, 2001)

I am ____% certain that I can...

1. Get students to believe they can do well in social studies schoolwork?
2. Help my students to value learning in social studies?
3. Motivate students who show low interest in social studies schoolwork?
4. Assist families in helping their children do well in social studies?

Self-efficacy for Student-oriented Teaching (Kilday & Lenser, 2012)

Fostering Relevance

1. Present content in my social studies classroom that students relate to other subjects.
2. Provide a rationale to make social studies tasks relevant.
3. Recognize students' thoughts in my explanation of social studies learning tasks.
4. Help students recognize how social studies material has value for reaching future personal goals.
5. Help students recognize how social studies material has value for their learning.
6. Create authentic learning opportunities for students to make social studies content knowledge relevant.
7. Help students make personal connections to the social studies content I teach.

Supporting students' ownership of learning

1. Help students appropriately monitor their own social studies classroom performance.

2. Help students identify strategies to support their own learning in social studies.
3. Model strategies in social studies that students can use in other classes beyond the academic year.
4. Assist struggling students in my social studies class to identify strategies that support their own learning.
5. Create opportunities for students to make choices about their own learning in social studies.
6. Create a learning environment in my social studies class that encourages independent thinking.
7. Provide opportunities for students' to set their own learning goals in social studies.

Teaching Goal Orientations (Butler, 2007; Butler, 2012)

Mastery Goals

1. I'd feel I had a successful day in school if I learned something new about myself as a teacher.
2. I'd feel I had a successful day in school if something that happened in class made me want to deepen my professional knowledge.
3. I'd feel I had a successful day in school if a student asked a question in class that made me think again about the subject matter
4. I'd feel I had a particularly successful day in school if I saw that I am developing professionally and teaching more effectively than in the past.

Ability-approach Goals

1. I'd feel I had a particularly successful day in school if my classes scored higher on an exam than those of other teachers.
2. I'd feel I had a particularly successful day in school if I was praised for showing high teaching ability relative to my colleagues.
3. I'd feel I had a particularly successful day if during a meeting my lesson plans were singled out as better than those other teachers.
4. I'd feel I had a particularly successful day if the principal singled me out as one of the best teachers in the school.

Ability-avoidance Goals

1. I'd feel I had a successful day in school if in a meeting the principal did not include me as one of the teachers having difficulty.
2. I'd feel I had a successful day in school if pupils did not ask any questions that I could not answer.

3. My goal is that my classes did not do any worse than those of other teachers on an exam.
4. I'd feel I had a successful day in school if I saw that my classes are not further behind in the curriculum than those of other teachers.

Work-avoidance Goals

1. I feel I had a particularly successful day when I didn't have any tests or homework to mark.
2. I'd feel I had a successful day if some of my classes were cancelled.
3. I feel I had a successful day if the material was easy and I didn't have to spend much time preparing lessons.
4. I feel I had a successful day when I got by without having to work hard.

Relational Goals

1. My main goal as a teacher is to build a deep personal relationship with each and every student
2. More than anything, I strive to create and maintain meaningful relationships with students.
3. My relationships with students are more important to me than anything else in my role as teacher.
4. I feel that I have succeeded as a teacher if I create close and warm relationships with students and classes.

APPENDIX B: STUDENT-ORIENTED TEACHING SELF-EFFICACY, FINAL SCALE

Self-efficacy for Student-oriented Teaching

I am ____% certain that I can...

1. Present content in my social studies classroom that students relate to other subjects.
2. Provide a rationale to make social studies tasks relevant.
3. Recognize students' thoughts in my explanation of social studies learning tasks.
4. Help students recognize how social studies material has value for reaching future personal goals.
5. Help students recognize how social studies material has value for their learning.
6. Create authentic learning opportunities for students to make social studies content knowledge relevant.
7. Help students appropriately monitor their own social studies classroom performance.
8. Help students identify strategies to support their own learning in social studies.
9. Model strategies in social studies that students can use in other classes beyond the academic year.
10. Assist struggling students in my social studies class to identify strategies that support their own learning.

APPENDIX C: EDUCATIONAL RATINGS QUESTIONNAIRE

This questionnaire is designed to give us a better understanding of teachers' beliefs about classroom challenges, practices, and goals to identify areas that could inform professional development. Your responses are anonymous and there are no right or wrong answers. Please complete each section as described below.

Section I: Demographics

Gender <input type="checkbox"/> Male <input type="checkbox"/> Female Age: _____ Race / Ethnicity <input type="checkbox"/> Caucasian <input type="checkbox"/> African American <input type="checkbox"/> American Indian <input type="checkbox"/> Asian <input type="checkbox"/> Hispanic <input type="checkbox"/> Other: _____	Number of years teaching <input type="checkbox"/> 1 – 3 Years <input type="checkbox"/> 4 – 10 Years <input type="checkbox"/> 11 – 15 Years <input type="checkbox"/> 16 – 24 Years <input type="checkbox"/> 25 + Years Number of years teaching social studies <input type="checkbox"/> 1 – 3 Years <input type="checkbox"/> 4 – 10 Years <input type="checkbox"/> 11 – 15 Years <input type="checkbox"/> 16 – 24 Years <input type="checkbox"/> 25 + Years
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Section II: Instructional Responsibilities

Grade-level <input type="checkbox"/> Elementary (K-5) <input type="checkbox"/> Middle School (6-8) <input type="checkbox"/> High School (9-12) <input type="checkbox"/> Other: _____ Subjects taught (check all that apply) <input type="checkbox"/> Social Studies <input type="checkbox"/> Language Arts <input type="checkbox"/> Science <input type="checkbox"/> Math <input type="checkbox"/> Other: _____ Primary instructional certification <input type="checkbox"/> Secondary Content Area <input type="checkbox"/> Elementary Education <input type="checkbox"/> English Language Learning (ESL) <input type="checkbox"/> Special Education <input type="checkbox"/> Other: _____	Classroom demographics (please estimate) a) Number of students you teach: _____ b) Number of students who are English Language Learners: _____ c) Number of students who receive English as a Second Language Services: _____ d) Number of students with IEPs: _____ Which best describes your school community? <input type="checkbox"/> Urban <input type="checkbox"/> Suburban <input type="checkbox"/> Rural
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Section III: Professional Development

Which dates have you participated, or you plan to participate, in the Teaching American History grant. If more than one, check all that apply. <input type="checkbox"/> September 2010 – April 2011 <input type="checkbox"/> May 2011 – April 2012 <input type="checkbox"/> May 2012 – April 2013 <input type="checkbox"/> May 2013 – April 2014 <input type="checkbox"/> None, I have not participated	Which Teaching American History grant opportunity is (or has been) open for your participation? <input type="checkbox"/> Unveiling History: Exploring America's Past <input type="checkbox"/> Everyday Americans, Exceptional Americans <input type="checkbox"/> I'm not sure	How many classes have you taken, if any, that address diversity in the classroom? <input type="checkbox"/> 0 Classes <input type="checkbox"/> 1 Class <input type="checkbox"/> 2 Classes <input type="checkbox"/> 3 Classes <input type="checkbox"/> 4 Or more classes
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Section IV: Confidence Ratings

Teachers have various levels of confidence for instructional tasks that may vary over the course of their career.

Considering your present teaching situation, please rate the percentage of how certain you are that you can do each of the following:

I am ___% certain that I can...		10%									100%
1	Provide a rationale to make social studies tasks relevant.	10	20	30	40	50	60	70	80	90	100
2	Model strategies in social studies that students can use in other classes beyond the academic year.	10	20	30	40	50	60	70	80	90	100
3	Get students in my class to believe they can do well in social studies schoolwork.	10	20	30	40	50	60	70	80	90	100
4	Assist struggling students in my social studies class to identify strategies that support their own learning.	10	20	30	40	50	60	70	80	90	100
5	Create authentic learning opportunities for students to make social studies content knowledge relevant.	10	20	30	40	50	60	70	80	90	100
6	Use my students' cultural background to help make social studies learning meaningful.	10	20	30	40	50	60	70	80	90	100
7	Use my students' prior knowledge to help them make sense of new social studies information.	10	20	30	40	50	60	70	80	90	100
8	Create a learning environment in my social studies class that encourages independent thinking.	10	20	30	40	50	60	70	80	90	100
9	Provide opportunities for students in my social studies class to set their own learning goals.	10	20	30	40	50	60	70	80	90	100
10	Help students recognize how social studies material has value for reaching future personal goals.	10	20	30	40	50	60	70	80	90	100
11	Identify ways how students communicate at home may differ from the school norms.	10	20	30	40	50	60	70	80	90	100
12	Help students recognize how social studies material has value for their learning.	10	20	30	40	50	60	70	80	90	100
13	Obtain information about my students' cultural background.	10	20	30	40	50	60	70	80	90	100
14	Help students make personal connections to the social studies content I teach.	10	20	30	40	50	60	70	80	90	100
15	Identify ways that the school culture (e.g., values, norms, and practices) is different from my students' home culture.	10	20	30	40	50	60	70	80	90	100
16	Implement strategies to minimize the effects of the mismatch between my students' home culture and the school culture.	10	20	30	40	50	60	70	80	90	100
17	Obtain information about my students' home life.	10	20	30	40	50	60	70	80	90	100
18	Establish positive home-school relations.	10	20	30	40	50	60	70	80	90	100
19	Develop a community of learners when my class consists of students from diverse backgrounds.	10	20	30	40	50	60	70	80	90	100
20	Teach students about their cultures' contributions through social studies.	10	20	30	40	50	60	70	80	90	100
21	Greet English Language Learners with a phrase in their native language.	10	20	30	40	50	60	70	80	90	100

I am ___% certain that I can...		10%										100%
22	Help students identify methods to monitor their own social studies classroom performance.	10	20	30	40	50	60	70	80	90	100	
23	Design a classroom environment using displays that reflects a variety of cultures.	10	20	30	40	50	60	70	80	90	100	
24	Praise English Language Learners for their accomplishments using a phrase in their native language.	10	20	30	40	50	60	70	80	90	100	
25	Present content in my social studies class that students relate to other subjects.	10	20	30	40	50	60	70	80	90	100	
26	Identify ways that standardized tests may be biased towards linguistically diverse students.	10	20	30	40	50	60	70	80	90	100	
27	Help students identify strategies to support their own learning in social studies.	10	20	30	40	50	60	70	80	90	100	
28	Revise instructional material to include a better representation of cultural groups.	10	20	30	40	50	60	70	80	90	100	
29	Critically examine the curriculum to determine whether it reinforces cultural stereotypes.	10	20	30	40	50	60	70	80	90	100	
30	Recognize students' thoughts in my explanation of social studies learning tasks.	10	20	30	40	50	60	70	80	90	100	
31	Design a lesson that shows how other cultural groups have made use of social studies.	10	20	30	40	50	60	70	80	90	100	
32	Model classroom tasks to enhance English Language Learners' understanding.	10	20	30	40	50	60	70	80	90	100	
33	Create opportunities for students to make choices about their own learning in social studies.	10	20	30	40	50	60	70	80	90	100	
34	Communicate with the parents of English Language Learners regarding their child's achievement.	10	20	30	40	50	60	70	80	90	100	
35	Help my students to value learning in social studies.	10	20	30	40	50	60	70	80	90	100	
36	Use examples that are familiar to students from diverse cultural backgrounds.	10	20	30	40	50	60	70	80	90	100	
37	Motivate students who show low interest in social studies schoolwork.	10	20	30	40	50	60	70	80	90	100	
38	Assist families in helping their children do well in social studies.	10	20	30	40	50	60	70	80	90	100	
Please consider, right now, in your present teaching situation, the strength of your personal beliefs in your capabilities to...								Weak beliefs	Very strong beliefs			
39	Motivate students to perform to their fullest potential in social studies.							1	2	3	4	
40	Provide a positive influence on the academic development of students in social studies.							1	2	3	4	
41	Maintain an environment in my social studies class in which students can work cooperatively.							1	2	3	4	

Section V: Other Educational Practices

Imagine that you are teaching a **social studies** class that includes **English Language Learners**. How often would you use the following instructional approaches to help your students learn the content? Using the scale below, please rate the items based on how often you would use the following approaches in your classroom.

In my social studies classroom, I would...		Never			Occasionally			Always		
1	Give recognition to students' home language and culture.	1	2	3	4	5	6	7	8	9
2	Explicitly teach test-taking skills.	1	2	3	4	5	6	7	8	9
3	Simplify the content material.	1	2	3	4	5	6	7	8	9
4	Give explicit instruction in literacy skills such as alphabetizing and use of context clues.	1	2	3	4	5	6	7	8	9
5	Use simpler language to explain more abstract topics.	1	2	3	4	5	6	7	8	9
6	Assign project groups based on the students' native languages.	1	2	3	4	5	6	7	8	9
7	Use activities such as role-playing and dramatization.	1	2	3	4	5	6	7	8	9
8	Use vocabulary in the students' native language to support new content material.	1	2	3	4	5	6	7	8	9
9	Assign students with an autobiographical assignment.	1	2	3	4	5	6	7	8	9
10	Present key information in both verbal and written formats.	1	2	3	4	5	6	7	8	9
11	Make bilingual dictionaries and/or thesauruses available to students.	1	2	3	4	5	6	7	8	9
12	Provide explicit vocabulary instruction.	1	2	3	4	5	6	7	8	9
13	Use primary source materials or real objects / artifacts.	1	2	3	4	5	6	7	8	9
14	Identify cognates and false cognates in the students' native language.	1	2	3	4	5	6	7	8	9
15	Allow students to complete assignments in their native language.	1	2	3	4	5	6	7	8	9
16	Explicitly identify specific academic strategies.	1	2	3	4	5	6	7	8	9
17	Pose higher thinking questions through the use of scaffolding.	1	2	3	4	5	6	7	8	9
18	Allow students to use their native languages.	1	2	3	4	5	6	7	8	9
19	Provide students with supplementary materials.	1	2	3	4	5	6	7	8	9
20	Display example projects in other languages.	1	2	3	4	5	6	7	8	9
21	Use graphic organizers and visual resources.	1	2	3	4	5	6	7	8	9

Sometimes teachers use different strategies depending on their classroom context, please use this space to elaborate on any exceptionalities to your ratings.

Section VI: Educational Goals

Teachers differ in their goals as teachers, and in the kinds of things that make them feel they had a good and successful day at work. Please rate the degree to which you personally agree or do not agree with each of the following statements.

		Do not agree at all			Agree completely	
1	I'd feel I had a particularly successful day in school if my classes scored higher on an exam than those of other teachers.	1	2	3	4	5
2	I'd feel I had a successful day in school if I learned something new about myself as a teacher.	1	2	3	4	5
3	I'd feel I had a successful day in school if in a meeting the principal did not include me as one of the teachers having difficulty.	1	2	3	4	5
4	My main goal as a teacher is to build a deep personal relationship with each and every student.	1	2	3	4	5
5	I feel I had a successful day when I got by without having to work hard.	1	2	3	4	5
6	I'd feel I had a successful day in school if pupils did not ask any questions that I could not answer.	1	2	3	4	5
7	I'd feel I had a particularly successful day in school if I was praised for showing high teaching ability relative to my colleagues.	1	2	3	4	5
8	I feel I had a particularly successful day when I didn't have any tests or homework to mark.	1	2	3	4	5
9	More than anything, I strive to create and maintain meaningful relationships with students.	1	2	3	4	5
10	I'd feel I had a particularly successful day in school if something that happened in class made me want to deepen my professional knowledge.	1	2	3	4	5
11	I'd feel I had a particularly successful day in school if my lesson plans were singled out as better than those of other teachers.	1	2	3	4	5
12	I'd feel I had a successful day in school if I saw that my classes are not further behind in the curriculum than those of other teachers.	1	2	3	4	5
13	I'd feel I had a particularly successful day if some of my classes were cancelled.	1	2	3	4	5
14	My relationships with students are more important to me than anything else in my role as a teacher.	1	2	3	4	5
15	I'd feel I had a successful day in school if a student asked a question in class that made me think again about the subject matter.	1	2	3	4	5
16	I'd feel I had a particularly successful day if the principal singled me out as one of the best teachers in the school.	1	2	3	4	5
17	I feel I had a successful day if the material was easy and I didn't have to spend much time preparing lessons.	1	2	3	4	5
18	I feel that I have succeeded as a teacher if I create close and warm relationships with students and classes.	1	2	3	4	5
19	I'd feel I had a particularly successful day in school if I saw that I am developing professionally and teaching more effectively than in the past.	1	2	3	4	5
20	My goal is that my classes did not do any worse than those of other teachers on an exam.	1	2	3	4	5

APPENDIX D: HSRB APPROVAL NOTIFICATION



Office of Research Integrity and Assurance

Research Hall, 4400 University Drive, MS 6D5, Fairfax, Virginia 22030
Phone: 703-993-5445; Fax: 703-993-9590

TO: Angela Miller, Psychology

FROM: Aurali Dade
Assistant Vice President, Research Compliance 

PROTOCOL NO.: 8678 Research Category: Masters Thesis

PROPOSAL NO.: N/A

TITLE: Teacher Beliefs regarding educational practices

DATE: July 22, 2013

Cc: Jessica Kilday
Monica Lenser

Under George Mason University (GMU) procedures, the amendment submitted on July 18, 2013, to this protocol does not change the status of the project. This project remains exempt since it falls under DHHS Exempt Category 2, research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior.

You may proceed with data collection. **Please note that any further modifications to your protocol must be submitted to the Office of Research Integrity & Assurance (ORIA) for review and approval prior to implementation.** Any adverse events or unanticipated problems involving risks to subjects including problems with confidentiality of data identifying the participants must be reported to the GMU Office of Research Integrity & Assurance.

GMU is bound by the ethical principles and guidelines for the protection of human subjects in research contained in The Belmont Report. Even though your data collection procedures are exempt from review by the GMU IRB, GMU expects you to conduct your research according to the professional standards in your discipline and the ethical guidelines mandated by federal regulations.

Thank you for cooperating with the University by submitting this protocol for review. Please call me at 703-993-5381 if you have any questions.

APPENDIX E: INFORMED CONSENT

<Teacher Beliefs Regarding Educational Practices>

RESEARCH PROCEDURES

This research is being conducted to learn more about how teachers rate their educational beliefs. If you choose to complete the survey, you will be asked to provide general demographic information about you and the students you teach and to answer questions that address your instructional responsibilities (i.e. grade-level, subjects/students taught), your professional development experience, confidence ratings, and other educational ratings related to teacher practice and instructional strategies. The survey should take approximately 15-20 minutes to complete.

RISKS

There are no foreseeable risks for participating in this research.

BENEFITS

There are no benefits to you as a participant other than to further research in teaching and professional development.

CONFIDENTIALITY

The data in this study will be confidential. The survey will be collected anonymously and no identifying data will be requested.

PARTICIPATION

Your participation is voluntary, and you may withdraw from the study at any time and for any reason. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party.

CONTACT

This research is being conducted by Jessica Kilday <jkilday@gmu.edu> and Monica Lenser <monica.lenser@masonlive.gmu.edu> at George Mason University under the supervision of Dr. Angela Miller (703-993-5590). You may call Jessica (571-308-6840) for questions or to report a research-related problem. You may also contact the George Mason University Office of Research Integrity & Assurance at 703-993-4121 if you have questions or comments regarding your rights as a participant in the research.

This research has been reviewed according to George Mason University procedures governing your participation in this research.

CONSENT

By completing and returning this survey, I agree to participate in this study and have read this form.

Version date: 4/11/13

APPENDIX F: RECRUITING LETTER

Teacher Name
School
School District

Re: Invitation to participate

Dear Teacher:

As a capstone to my program of study at George Mason University, I am interested in learning more about how teachers rate their educational beliefs. Therefore, I am writing to invite you to participate in a short survey that should take no more than 15-20-minutes to complete.

With permission from the program director, I consulted application and attendance records from the Teaching American History grant in conjunction with public school websites to compile a recruitment list for this project. Please note that your participation in this short survey is entirely voluntary and is not associated with grant or school district. No identifying data will be collected on the survey.

Your contribution is valuable and will help further research on teacher professional development. Items on the survey will address:

- General demographic information
- Instructional responsibilities
- Professional development experience
- Confidence ratings
- Other educational ratings related to teacher practice and instructional strategies

Please consider completing this survey, we value your time and input. This research is being conducted by me <jkilday@gmu.edu>, in collaboration with a fellow graduate student <monica.lenser@masonlive.gmu.edu>, under the supervision of Dr. Angela Miller at George Mason University. If you have any questions about the completion of the survey, please feel free to contact us.

Enclosed, you will find a copy of the confidentiality and consent forms, a blank survey for you to complete if you choose to participate, and an addressed envelope to return the survey through interoffice mail. Survey responses will be accepted through the end of the 2013 school year. Thank you again for considering this request.

Sincerely,

Jessica Kilday
George Mason University
571-308-6840

APPENDIX G: RECRUITING FLYER



Participants Needed!

As part of a research project on teacher beliefs about social studies instructional strategies, we are seeking participants to complete a short survey that should take approximately 15-20 minutes to complete.

You are eligible to participate if:

- You teach social studies in elementary, middle, or high school
- You are responsible for social studies content with English Language Learners or special education students
- You have the above instructional responsibilities during the 2012-2013 or 2013-2014 school year

Your contribution is valuable and will help further research on teacher professional development. If you would like to participate, please visit

<https://www.surveymonkey.com/s/ratings-questionnaire>

Items on the survey will address: (a) general demographic information, (b) instructional responsibilities, (c) professional development experience, (d) confidence ratings, and (e) other educational ratings related to teacher practice and instructional strategies.

You may contact Jessica Kilday (jkilday@gmu.edu) or Monica Lenser (mlenser@masonlive.gmu.edu) with any questions regarding this research.

Thank you!

APPROVED

George Mason University

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