

AN EXAMINATION OF THE RELATIONSHIP BETWEEN
TEACHER EFFICACY AND TEACHER RELIGIOSITY

Karen K. Wright, B.S., M.Ed.

Dissertation Prepared for the Degree of
DOCTOR OF PHILOSOPHY

UNIVERSITY OF NORTH TEXAS

December 2010

APPROVED:

Jane B. Huffman, Major Professor
Rebecca Glover, Minor Professor
Richard Fossey, Committee Member
Linda Stromberg, Committee Member
Nancy Nelson, Chair of the Department of
Teacher Education and Administration
Jerry R. Thomas, Dean of the College of
Education
James D. Meernik, Acting Dean of the Robert
B. Toulouse School of Graduate Studies

Wright, Karen K. An examination of the relationship between teacher efficacy and teacher religiosity. Doctor of Philosophy (Educational Administration), December 2010, 87 pp., 15 tables, 1 figure, references, 168 titles.

The purpose of this study was to examine the relationship between teacher religiosity and teacher self-efficacy. The present study builds upon previous research which has shown purposeful work in everyday living fosters intrinsic motivation, religious orientation affects daily living, and teacher self-efficacy beliefs predict student achievement.

Religiosity and self-efficacy data were gathered from public school teachers from a suburban school district in North Texas and from private Christian schools in Western Washington. The Age Universal I-E scale (a measure of religious orientation intended to capture how one lives out his/her religiosity), Teachers' Sense of Efficacy Scale, and a teacher characteristic form were used to collect data. In a multiple regression analysis, independent variables included teacher age, gender, grade level taught, experience level, campus type (public or private religious), and teacher religious orientation (intrinsic or extrinsic); the dependent variable was the score for teacher self-efficacy.

The regression analysis resulted in an equation that explained only slightly more than 9% of the variance in the score for teacher self-efficacy. Three significant variables were identified-- grade level taught, teacher age, and intrinsic religious orientation. Teacher age and teacher intrinsic religious orientation were the two most important contributors according to a comparison of beta weights. Intrinsic religious orientation contributed to the equation, but it acted as a suppressor variable in the study, having little predictive value by itself but contributing to the predictive value of the model. Based on the data collected, recommendations for future research and suggestions for field application are offered.

Copyright 2010

by

Karen K. Wright

ACKNOWLEDGMENTS

With a grateful and humble heart I would like to thank the many individuals who have supported me through my doctoral journey. Glory to God the Father and the Son for lighting the fire within me to pursue my doctorate, to persist when discouraged, and to finish with a grateful heart. May my future work in education serve to glorify Him (Matthew 6:33).

I would like to thank my major professor and mentor, Dr. Jane Huffman of the University of North Texas. I cannot express my gratitude for the many ways she has supported me throughout my graduate career, my professional career, and my role as a mother of young children. Thank you, Dr. Huffman, for your pursuit of excellence and for your gentle, encouraging spirit.

I would also like to thank my committee members at the University of North Texas, Dr. Becky Glover, Dr. Linda Stromberg, and Dr. Richard Fossey, for their insight and assistance throughout the dissertation process and for their willingness to support my dissertation topic.

I dedicate this research to my loving parents, Carl and Johanna Anderson, for instilling a solid work ethic in my sister, Julie, and me and for encouraging me to begin, to persist, and to finish strong. Thank you, Mom and Dad, for all of the sacrifices you made for Julie and me and for the many spoken and unspoken ways you bless our lives.

I faithfully give my heart to my husband and best friend, Shawn, and our two precious children, Audrey and Alec, for supporting and encouraging me. Thank you for being gracious as I spent countless hours studying, reading, and writing. And finally, I will cherish fond memories of my devoted English Springer Spaniels, each of whom spent hours underfoot at my desk at home. Thank you, Georgette and Gracie for 12 years of companionship and unconditional love while I worked through my master and doctoral degrees.

TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	iii
LIST OF TABLES AND FIGURES.....	vii
Chapters	
1. INTRODUCTION	1
Statement of the Problem.....	2
Significance of the Study	2
Research Question	3
Theoretical Base.....	4
Teaching Efficacy	4
Religiosity	5
Overview of the Methodology	6
Assumptions.....	6
Delimitations.....	7
Limitations	7
Definition of Key Terms.....	7
Organization of the Study	8
2. LITERATURE REVIEW	10
Theoretical and Conceptual Frameworks of Teaching Efficacy.....	10
Theoretical Construct of Self-Efficacy	10
Research on Teaching Efficacy	13
Sources of Teaching Efficacy	16
Theoretical and Conceptual Frameworks of Religiosity	20
Defining Religiosity.....	20
Theories of Religion as Related to Vocation	21
Research Methods in Measuring Religiosity	23
General Findings with Respect to Religiosity	24
Teachers and Religiosity.....	27
Constitutional Rights	28
The Spirit of Education: An Ongoing Discussion	31

	Summary	35
3.	METHODOLOGY	37
	Research Question	37
	Research Design.....	37
	Instrumentation	38
	Data Collection	42
	Data Analysis	43
	Summary	45
4.	STUDY FINDINGS.....	46
	Description of Sample Participants.....	46
	Data Assessment	48
	Data Analysis	52
	Summary.....	54
5.	DISCUSSION AND FINDINGS.....	55
	Review of Methodology	55
	Summary of Results	55
	Campus Type	56
	Gender.....	57
	Grade Level Taught	58
	Teacher Experience.....	59
	Teacher Age	60
	Intrinsic Religiosity.....	61
	Extrinsic Religiosity.....	62
	Discussion.....	62
	Shared Variance	64
	Missing Variables	64
	Academic Optimism	65
	Teacher Emotion.....	66
	Intrinsic Religiosity as a Personality Variable.....	67
	Limitations and Suggestions for Future Research	69
	Suggestions for Practitioners	69

Recommendations Related to Teacher Age and Experience Level	70
Recommendations Related to Intrinsic Religiosity.....	71
Summary and Final Remarks.....	74
APPENDIX: INSTITUTIONAL REVIEW BOARD APPROVAL.....	75
REFERENCES	77

LIST OF TABLES AND FIGURES

Page

Tables

1.	TSES Subscale Factor Items.....	39
2.	TSES Reliabilities.....	40
3.	Age Universal I-E Scale Subscale Factor Items	41
4.	Age Universal I-E Scale Reliabilities	42
5.	Data Coding	44
6.	Teacher Campus Type, Grade Level, and Gender.....	47
7.	Teacher Experience Level by Campus Type	47
8.	Teacher Age by Campus Type.....	47
9.	Descriptive Statistics of Study Variables.....	48
10.	Standardized Residuals	49
11.	Cronbach’s Alpha for TSES and Age Universal I-E Scale	51
12.	Collinearity Statistics for Study Variables.....	52
13.	Summary of Correlations Between Study Variables	53
14.	Model Summary.....	53
15.	Summary of Regression Weights for Variables Predicting Teacher Efficacy.....	53

Figures

1.	Comparison of standardized residual scores and predicted value	50
----	--	----

CHAPTER 1

INTRODUCTION

But yield who will to their separation,
My object in living is to unite
My avocation and my vocation
As my two eyes make one in sight.

Robert Frost

In the current era of high stakes standards, teacher accountability, and federal and state mandates, researchers continue to report teacher efficacy directly affects student achievement and motivation (Bandura, 1997; Tschannen-Moran & Woolfolk Hoy, 2001). Because a teacher's level of efficacy yields higher levels of enthusiasm, more effective pedagogical decisions, and possibly a more persistent, committed attitude, it is no surprise researchers have conducted a myriad of studies defining and measuring the construct (Bandura, 1997). What has not been measured, however, is the correlation between teachers' self-efficacy beliefs and other intrinsic motivators, such as private belief systems, morals, values, or more specifically, religiosity (Hartwick, 2004). Huffman (1998) proposed religiosity may be a stronger determinant of our values than any other predictor. For example, consider one teacher who perceives teaching to be a vocation or a religious calling, while a different teacher perceives it as an occupation or a job. Religious theorists and recent educational research has suggested this notion is intuitive because religiosity affects human behaviors and beliefs (Light, Keller, & Calhoun, 1989; Hartwick, 2004; Vitell, Paolillo, & Singh, 2005; Pals, 2006)

Bandura (1997) explained a person's occupation provides a major source of personal identity and self worth and self-efficacy beliefs play a large role in career development. Furthermore, religious theorists, such as John Calvin and Martin Luther, suggested one's daily work is most rewarding when it has personal and religious meaning and purpose, no matter the

occupation (Pals, 2006). Perhaps teachers whose religiosity is a central component of their lives have higher levels of teaching self-efficacy than teachers whose religiosity is a peripheral component of their lives. Such a finding may substantiate the work of authors such as Parker Palmer (1983), who proposed only through spiritual transformation can teachers change pedagogical and institutional practices, or Rachel Kessler (2000), who suggested teachers are more responsive to students when their spirits are renewed.

Statement of the Problem

Although researchers continue to search for ways to enhance teacher efficacy, none have explored whether or not a teacher's religiosity affects efficacy; more specifically, no one has examined the differences in teaching efficacy beliefs among private versus public school teachers. Henson (2001a) stated: "if teacher efficacy is the powerful predictive construct it has been thought to be, then research examining the processes by which such efficacy is built is critical to fostering teacher efficacy and, ultimately, changing behavior" (p. 9). This study surveyed public school teachers in one school district in North Texas and private school teachers from schools in Western Washington to measure the relationship between teacher efficacy and teacher characteristics, including teacher religious orientation, age, gender, grade level taught, years of teaching experience, and campus type (public versus private religious).

Significance of the Study

Teachers and administrators have many resources to guide them in making effective pedagogical decisions. The last ten years brought a wave of research-driven curricular and leadership frameworks for improvement, including the work of Carol Ann Tomlinson (1999),

Grant Wiggins and Jay McTighe (2005), Robert Marzano (2007), Michael Schmoker (2006), Michael Fullan (2007), Linda Lambert (1998), and Charlotte Danielson (2002). Clearly there is no shortage of materials outlining the latest pedagogical strategies, improvement models, interventions, or research tools; however, few focus on the inner life of the teacher.

Fawns (2006) reported although teachers indicated using personal faith as a coping strategy to counteract job-related stressors, this phenomenon has not been thoroughly investigated. Because there are no studies investigating the relationship between teacher efficacy and teachers' intrinsic or extrinsic religious orientation (Allport & Ross, 1967), this study addresses the gap in the literature. If significant correlations exist between religiosity and efficacy, this research will offer teachers an additional tool to enhance their teaching efficacy. The results of this study will inform school administrators and teachers about the relationship between a teacher's religiosity and efficaciousness at work, thus providing information about the benefits of exploring and strengthening this inner life.

Research Question

The research question guiding this study explores the relationships between teacher characteristics, teachers' efficaciousness as measured by the Teacher's Sense of Efficacy Scale (TSES) (Tschannen-Moran & Woolfolk Hoy, 2001) and teachers' religious orientation as measured by the Age Universal I-E scale (Gorsuch & Venable, 1983). The question asks, "Which variables are most salient in predicting teacher efficacy?"

Theoretical Base

Sagor (2000) stated “reasonable people do not change present practice unless or until they have credible data that causes them to believe improvement will result” (p. 33). Over 25 years of research has suggested high levels of teaching efficacy increases teachers’ beliefs they can overcome pedagogical obstacles and bring about desirable classroom outcomes (Henson, 2001a). Furthermore, religious theorists contend meaningful work in every-day living provides intrinsic motivation and may yield greater job satisfaction (Pals, 2006). Therefore, the theoretical base for this study purports there to be a positive relationship between teachers’ intrinsic religious orientation and their teaching self-efficacy beliefs.

Teaching Efficacy

Bandura first introduced the notion of self-efficacy in 1977, later describing self-efficacy as “beliefs in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997, p. 3). He reported on the many ways efficacy beliefs affect behavior, including the areas of cognitive functioning, health functioning, clinical functioning, as well as collective efficacy beliefs within group settings, such as the workplace (Bandura, 1997).

Teaching efficacy research specifically addresses how efficacy beliefs affect teacher behaviors. Researchers have explained teaching efficacy affects the amount of effort teachers expend during challenging and demanding situations and may predict how often teachers participate in goal setting, experimentation, planning and organization; furthermore, efficacy beliefs may also predict a teacher’s overall enthusiasm for teaching (Bandura, 1997; Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). Bandura (1997) offered four sources of efficacy beliefs: mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal. These

experiences can influence one's occupational choices; additionally, Bandura (1997) explained a person's vocation shapes personal identity and self-worth. He stated humans must wrestle with "the type of identity they seek to construct for themselves" (p. 422).

Other researchers explore demographic predictors of teaching efficacy, such as teacher gender, age, grade level taught, and experience level and reported mixed results (Fives & Buehl, 2010; Edwards, Green, & Lyons, 1996; Penrose, Perry, & Ball, 2007; Fives & Looney, 2009; Paneque & Barbetta, 2006).

Religiosity

Religious theorists, such as Max Weber, also suggested human behavior can be explained by analyzing the inner motives of humankind (Pals, 2006). Weber recognized the entanglement of personal conditions, agendas, religion, economics, and society at large. His moral framework suggested vocation is a solemn duty assigned by God, everyday work has religious importance, and people should be self-disciplined and spiritual in their daily work (Pals, 2006). Wheatley (2002) further explained "the stronger our sense of vocation, the more resilient and courageous we are. And we can only develop a sense of purpose or vocation from believing in a power and order greater than our own" (p. 43). John Calvin also encouraged this kind of living, by suggesting people live as God's servants in their daily lives and "worldly tasks" (Pals, 2006, p. 162).

Although the topic of teacher spirituality and religiosity has been largely avoided in academic circles, a discussion is emerging in the field research. Some believe voiding public education of religion and spirituality is endangering the system, but others believe America's religious beliefs should be kept out of the public circle (Kessler, 2000; Carter, 1993). Recent

studies have encouraged researchers to further explore the role teachers' psychographic attributes, such as religious beliefs, values, and spirituality play in public schools, outlining pedagogical tools teachers can use to enhance instruction and improve relationships with students (Jax, 2006; Kessler, 2000; Hartwick, 2004).

Overview of the Methodology

The purpose of this study was to describe the relationship between teachers' demographic variables, religious orientation and efficaciousness as measured by a demographic form, the Age Universal I-E scale and the TSES. The study used descriptive and correlational statistics describe the relationship between the variables as well as utilized multiple regression analysis to determine which teacher characteristics best predict teaching efficacy. The predictor variables were teacher age, gender, experience level, grade level taught, and campus type (public versus private religious), and teacher religious orientation. The TSES is a Likert-scale survey and loads for three factors purported to affect the work life of a teacher: efficacy for instructional strategies, efficacy for classroom management, and efficacy for student engagement. The Age Universal I-E scale is a 20-item Likert-scale survey used to measure religious orientation and loads for two factors, extrinsic and intrinsic religious orientations.

Assumptions

This study assumes teachers were honest and forthright in their responses and the sample of public and private school teachers was representative of the larger teacher population. Furthermore, the data were gathered at one point in time, during the spring of 2010, to insure stability of the findings (Bryant, 2004).

Delimitations

The following delimitations applied in this study indicated possible barriers to generalizability:

1. The sample population included teachers from one school district in North Texas and private Christian schools in Western Washington.
2. The sample consisted of mostly non-Latino white Christian teachers.

Limitations

The methodology of this study was limited to the following factors:

1. Data were collected from teachers willing to participate in the survey from one public school district in North Texas and two private schools in Western Washington.
2. Schools were selected based on approvals from school superintendent and campus principals.
3. The study was limited to teachers who completed the surveys.
4. The study was limited by the measurement of teacher efficacy using the TSES and the measurement of religious orientation using the Age Universal I-E scale.
5. The teachers scored themselves the way they preferred to be perceived rather than scoring themselves accurately.

Definition of Key Terms

The following definitions are used in this study:

- Christianity is defined as “the religion based on the person and teachings of Jesus of Nazareth” (Oxford American College Dictionary, 2002, p. 247).
- Religious orientation is defined as the dimension of religion characterized by “two poles of subjective religion,” (Allport & Ross, 1967) intrinsic and extrinsic.

- Extrinsic religious orientation is defined as a set of utilitarian and instrumental set of values in which religion is used for “security, solace, sociability and distraction, status and self-justification” (Allport & Ross, 1967, p. 434).
- Intrinsic religious orientation is defined an internalized belief system in which people find their master motives in religion (Allport & Ross, 1967).
- Psychographic is defined as “the study and classification of people according to their attitudes, aspirations, and other psychological criteria” (The Oxford American College Dictionary, 2002, p. 1095).
- Religiosity is “defined as a particular institutionalized or personal system of beliefs, values, and practices relating to the divine—a level of reality or power that is regarded as the ‘source’ or ‘ultimate’ transcending yet immanent in the realm of human experience” (Worden, 2005, p. 221).
- Teacher efficacy is defined as “teachers’ beliefs about their capability to impact students’ motivation and achievement” (Tschannen-Moran & Hoy, 2007, p. 944).

Organization of the Study

This chapter provided a brief overview of the purpose and goals of this study. It reviewed the research topic and problem statement, defined key terms, and established the theoretical base for the research. A brief overview of the methodology was included, as well as the assumptions, delimitations, limitations, definitions, and an explanation of the significance of exploring this topic. The next chapter delves deeper into the literature addressing teacher efficacy and religious orientation to establish a firm foundation for the study. The third chapter explains the research participants, instrumentation, data analysis, and data collection procedures. The final two

chapters present the results, analyze and interpret the data, and make recommendations for future research and field practitioners.

CHAPTER 2

LITERATURE REVIEW

The purpose of this chapter is to establish a theoretical framework for examining the relationship between teacher religiosity and teacher efficacy. The chapter presents a review of the literature related to defining efficacy and teaching efficacy, explains measurement dilemmas, and summarizes recent general findings related to teacher efficacy. Additionally, it reviews theories of religiosity, the concept of vocation, and research methods and general findings related to religiosity. Finally, it summarizes recent literature devoted to exploring the relationship between spirituality, religion and education.

Theoretical and Conceptual Frameworks of Teaching Efficacy

The theoretical and conceptual frameworks for this study are based on the work of Albert Bandura, the developer of the social cognitive theory (1977, 1986, 1997). His work outlined the many ways efficacy beliefs affect behavior, thus inspiring researchers over the last three decades to explore and measure their predictive power over such behaviors as addiction, depression, and academic performance (Henson, 2001). Teacher efficacy research specifically explores teachers' beliefs in their abilities to bring about desired outcomes in their students' performances and is influenced by Bandura's (1977, 1997) self-efficacy framework and Rotter's (1966) locus of control theory.

Theoretical Construct of Self-Efficacy

Several recent doctoral dissertations and research articles have provided comprehensive and consistent reports of the development and formation of the social cognitive learning theory

and self-efficacy theory; however in order to inform the direction of this research, it is important to revisit the major tenets of each (Egger, 2006; Hrnecir, 2007; Mascall, 2003; Ritchie, 2006; Ryan, 2007; Tagger, 2006; Tschannen-Moran & Hoy, 2007). This overview provides an understanding of the different ways self-beliefs influence human behavior, foundations on which theories of teaching efficacy rest.

Three decades ago Bandura (1977) introduced the theoretical construct of self-efficacy in his influential article, "Self-efficacy: Toward a Unifying Theory of Behavioral Change." Bandura (1977) proposed four sources of personal efficacy expectations: performance accomplishments, vicarious experience, verbal persuasion, and physiological states, later specifically defining perceived self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). He differentiated between efficacy expectations and outcome expectations, explaining efficacy expectations include the belief one can successfully "execute the behavior required to produce the outcomes," while outcome expectancies involve "a person's estimate that a given behavior will lead to certain outcomes" (Bandura 1977, p. 193). In short, "in activities in which outcomes depend on quality of performance, efficacy beliefs determine the types of outcomes that are foreseen" (Bandura, 1997, p. 126). Both efficacy and outcome expectations determine the type of activities people choose and how much effort and persistence they will expend during stressful situations (Bandura, 1977).

These beliefs of self-efficacy are related to Bandura's (1997) explanation of human agency. Generally, humans will not attempt tasks if they do not believe they can produce the desired results. Social cognitive theory defines human agency by presenting a model entitled "triadic reciprocal causation" (Bandura, p. 6). This model suggests there is a bidirectional

relationship between three determinants of behavior—“cognitive, affective, and biological events; behavior; and environmental events” (Bandura, 1997, p. 6). These three forces interrelate and shape our self-beliefs, guiding us to understand “we are products of the dynamic interplay between the external, the internal, and our current and past behavior” (Henson, 2001a).

Bandura (1997) asserted self-efficacy beliefs affect career pursuits and professional development. One’s vocation is more than just a way to provide financial income, for it shapes personal identity, self-worth, and oftentimes, educational choices. Although personal interests and prior successful experiences may inspire career paths, and in turn, enhance personal efficacy, studies show perceived self-efficacy plays the stronger determinant role than occupational interests (Bandura, 1997). “People who are beset with doubts about their efficacy either shun occupations in the corresponding domains or fail to mount the perseverant effort needed to succeed should they get into them” (Bandura, 1997, p. 424). Furthermore, perceived efficacy affects employability and reemployability—those with higher levels of efficacy show increased job search activities and a greater likelihood of employment opportunities (Bandura, 1997).

Bandura (1997) further describes human behavior as being shaped by both personal influence and collective influence, interdependently connecting one’s professional and social life. Thus, social cognitive theory supports moving from relying solely on individual human agency to exploring collective agency, “people’s shared belief in their capabilities to produce effects collectively” (Bandura, 1997, p. 7). Collective efficacy provides an overarching, broad influence on an organization and its social systems; for example, schools whose teachers collectively judge themselves to be highly capable are more likely to “flourish academically” (Bandura, 1997, p. 469).

Research on Teaching Efficacy

Tschannen-Moran and Hoy (2007) define teacher efficacy as “teachers’ beliefs about their capability to impact students’ motivation and achievement” (p. 944). Teaching efficacy is thought to affect the amount of effort teachers put forth during challenging or demanding situations, and it may predict whether or not they experience work-related stress or depression (Bandura, 1997). It may also be a predictor of teacher behaviors, such as goal setting, experimentation, planning and organization, and overall enthusiasm for teaching. It also affects student outcomes, such as overall academic performance and motivation, and a student’s chance of being referred to special education (Podell & Soodak, 1993, Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998).

Educational researchers examining self-efficacy theory have spent the last 25 years applying it to teacher behaviors and wrestling with how best to measure it. In order to illuminate major measurement dilemmas and future directions, this study will highlight three seminal research reports, each of which yielded a measure of teaching efficacy. Those studies include Rand researchers (Armor et al., 1976), Gibson and Dembo (1984), and the combined works of Tschannen-Moran et al. (1998) and Tschannen-Moran and Woolfolk Hoy (2001).

The first seminal study of teacher efficacy was conducted by Rand in 1976 and was based on Rotter’s (1966) locus of control theory. This theory outlined the relationship between outcomes and human actions (Bandura, 1997). The Rand instrument measured teachers’ internal and external beliefs related to student motivation and performance. They found teacher efficacy was significantly related to student success (Armor et al., 1976). Although critics argued the need for a longer, more comprehensive survey to measure educators’ perceived self-efficacy, this study ushered in a new strand of self-efficacy theory—teaching efficacy.

In their 1984 article entitled, “Teacher Efficacy: A Construct Validation,” Gibson and Dembo introduced their own more extensive measure of teaching efficacy. This 30-item instrument expanded the two-dimensional Rand Corporation survey to explore internal and external teacher efficacy beliefs. Their survey, called the Teacher Efficacy Scale (TES) yielded the terms general teaching efficacy (GTE) and personal teaching efficacy (PTE). When combined, the construct of teacher efficacy (TE) was born and “purported to reveal the extent to which a teacher believed that the consequences of teaching—student motivation and learning—were in the hands of the teacher” (Tschannen-Moran et al., 1998, p. 205).

Gibson and Dembo (1984) noted teacher efficacy was linked to the amount of effort teachers put forth during challenging times and predicted how likely they were to work with small groups versus whole-group instruction, guide a student to the correct answer rather than criticize him for an incorrect response, and possess the willingness and desire to try new materials and approaches (Tschannen-Moran et al., 1998). Furthermore, teachers with a low sense of efficacy were more likely to refer a student to special education rather than express a willingness to work with students who are experiencing academic difficulties (Tschannen-Moran et al., 1998). Due to the relatively small sample size used in their study, the researchers emphasized caution when generalizing the findings or reaching conclusions about teachers in general (Gibson & Dembo, 1984).

Henson (2001a) noted although the TES was considered the leading instrument in the field, by the mid-1990s, critics argued Gibson and Dembo’s (1984) instrument was more a reflection of locus of control theory than self-efficacy theory (Henson 2001a). Bandura (1997) further explained “self-efficacy and locus of control are sometimes mistakenly viewed as

essentially the same phenomenon,” and believing one can produce an action (self-efficacy) is entirely different than believing actions will affect outcomes (locus of control).

In response to this series of measurement dilemmas, Tschannen-Moran et al. (1998) and Tschannen-Moran and Woolfolk Hoy (2001) introduced a new model and measurement instrument purported to merge the two competing theoretical strands—Rotter’s (1966) locus of control theory and Bandura’s (1977) self-efficacy theory. The outcome was a new measure, entitled the Ohio State Teacher Efficacy Scale (OSTES), later referred to as the Teachers’ Sense of Efficacy Scale (TSES). The survey was used in three different studies and eventually yielded a short form made up of 12 items and a long form made up of 24 items. Not only did the researchers examine the factor structure, reliability, and validity of the instruments and determined both the long and short forms to be considered “reasonably valid and reliable” (Tschannen-Moran & Hoy, 2001, p. 801), they also purported their instruments superior to the Rand and Gibson and Dembo instruments because the TSES captured a broader spectrum of teaching tasks.

Using Tschannen-Moran and Hoy’s 2001 instruments, today’s researchers continue to explore how to enhance levels of teaching efficacy. Richie (2006) explored the self-efficacy scores between preservice teachers who began their college experience at a community college and preservice teachers who began their coursework at the university, and Hrnir’s (2007) study reported the ability to increase preservice teacher efficacy development during the student teaching experience. She determined positive and nurturing relationships with mentor or cooperating teachers influenced the student teacher’s efficacy. Ryan (2007) concluded certain principal practices affect teacher efficacy, particularly the relationship between principal leadership and a teacher’s efficacy in student engagement.

Tschannen-Moran and Hoy (2007) explored the relationship between a teacher's sense of efficacy and two sources of efficacy: verbal persuasion in the form of positive interpersonal interactions with school administrators, fellow faculty members, and the community, and mastery experiences as defined by satisfaction associated with prior teaching successes. They found verbal persuasion to be more influential for novice teachers than to career teachers, and mastery experiences revealed the strongest impact on teaching efficacy (Tschannen-Moran & Hoy, 2007). In response to their findings, they stated it behooves school administrators to "know more about how these beliefs are formulated and sustained throughout the teaching career" (Tschannen-Moran & Hoy, 2007).

Sources of Teaching Efficacy

"Compelling evidence has been accumulating over the past three decades revealing the relationship of teachers' beliefs about their capability to impact students' motivation and achievement to important processes and outcomes in school" (Tschannen-Moran & Hoy, 2007, p. 944). Labone (2004), however, noted there is a need to better understand Bandura's (1986, 1997) sources of self-efficacy beliefs. Bandura (1986, 1997) purported four primary sources of efficacy beliefs: mastery experiences, vicarious experiences, verbal persuasion, and physiological arousal.

Of these four sources, mastery experiences are considered the strongest and most powerful, and for teachers, require accomplishments with students (Bandura, 1997; Pajares, 2002; Tschannen-Moran et al., 1998; Tschannen-Moran & Hoy, 2007). Authentic experiences provide information related to one's capabilities and chances for success (Bandura 1997). Perseverant efforts resulting in success will enrich personal efficacy beliefs over time;

furthermore, self-monitoring throughout the process can also enhance perceived efficacy and future performance (Bandura, 1997). Teachers, for example, best learn classroom management, instruction, and assessment strategies when working directly with a group of students (Tschannen-Moran et al., 1998).

Vicarious experiences involve learning from others, and in the case of teachers, may include watching others teach, engaging in discussions about teaching, and comparing one's own personal teaching efficacy to others (Tschannen-Moran et al., 1998). An observer's efficacy can either increase or decrease depending on her perception of the task difficulty and the subsequent performance of the model (Tschannen-Moran et al., 1998). Although vicarious experiences are considered weaker than mastery experiences in increasing personal efficacy beliefs, observers who lack prior experience may be more sensitive to the benefits of watching a model (Pajares, 2002).

The third source of efficacy information is verbal persuasion. Constructive, thoughtful feedback from supervisors, colleagues, and students may influence perceived efficacy, while negative feedback may undermine and weaken teaching efficacy beliefs (Pajares, 2002; Tschannen-Moran et al., 1998). Bandura (1997) and Pajares (2002) suggested effective persuaders affirm efficacy beliefs while ensuring the goals and envisioned successes are attainable.

The final source of efficacy is physiological and affective states (Bandura, 1997). Stress, anxiety, and other types of arousal can indicate either positive or a negative response, depending on the scenario (Bandura, 1997; Tschannen-Moran et al., 1998). Tschannen-Moran et al. (1998) explained moderate levels of physiological arousal can improve performance, because one may contribute more energy or attention to the task; however, high levels may actually impair one's

skills and capabilities. Bandura (1995) further supported this notion, stating “people have to live continuously with a psychic environment that is largely of their own making” (p. 8). Efficacy beliefs can exercise control over stressful responses, for what one person may approach as an attainable and worthwhile challenge, another person may perceive as a threat (Bandura, 1995).

Bandura (1997) suggested “any given influence, depending on its form, may operate through one or more of these sources of efficacy information” (p. 79). In order to be integrated into self-efficacy judgments, one must wrestle with these sources of information, and cognitive interpretation depends on one’s personal, social, and other situational and schematic factors (Bandura, 1997). While Bandura (1995, 1997) acknowledged the existence of a psychic environment and the impact of situational and schematic factors on performance, he did not include religiosity as having an effect on performance beliefs.

Although Tschannen-Moran and Hoy (2007) explained demographic variables are not typically predictors of teaching efficacy, researchers continue to explore the predictive power of these variables, such as teacher experience level, teacher gender, teacher age, and grade level taught (Fives & Buehl, 2010; Edwards, Green, & Lyons, 1996; Penrose, Perry, & Ball, 2007; Fives & Looney, 2009; Paneque & Barbetta, 2006). Soodak and Podell (1997) reported teachers in the early years of the profession perceive themselves as being more efficacious than their more experienced colleagues; however, efficacy levels drop rapidly, oftentimes during the first year of teaching experience. Similarly, Edwards, Green and Lyons (1996) reported teacher experience is negatively related to teaching efficacy; however, Fives and Buehl (2010) and Penrose, Perry, and Ball (2007) both found teacher experience was positively related to teaching efficacy. Paneque and Barbetta (2006) reported no significant relationship among teacher experience and teacher efficacy.

Fives and Looney (2009) and Edwards, Green, & Lyons (1996) reported women teachers as having higher teaching efficacy, while Penrose Perry, and Ball (2007) found no difference among the teaching efficacy of male and female teachers. Edwards, Green, & Lyons (1996) reported teacher age predicts teaching efficacy, while Penrose, Perry, and Ball (2007) and Fives and Looney (2009) found no relationship between teacher age and teaching efficacy. Fives and Buehl (2010) and Fives and Looney (2009) both reported elementary school teachers as being more efficacious than secondary school teachers, however, Fives and Buehl (2010) suggested a gender confound, as elementary school teachers are generally female.

Currently there are no studies comparing the teaching efficacy differences among public and private school teachers; however, Alt and Peter (2002) reported within the private sector, teachers at religious schools are more likely than public school teachers to report being satisfied with teaching at their school and with their class sizes. Furthermore, Catholic school teachers reported consistent, high levels of sustained job commitment (Byrk, Lee, and Holland, 1993). Additionally, private school teachers were more likely to state they felt supported by parents (42 verses 16 percent) and reported having a stronger influence on school policies and more curricular freedoms than public school teachers (Alt & Peter, 2002; Byrk, Lee, & Holland, 1993). Lastly, private school teachers reported they share similar beliefs about the school's mission with fellow colleagues (Alt & Peter, 2002; Byrk, Lee, & Holland, 1993) and were more likely than their public school counterparts to agree the administration was supportive and teachers had the necessary supports and materials needed to meet organizational goals (Alt & Peter, 2002). Although no studies have explored whether or not private school teachers' job satisfaction levels affect efficacy beliefs, it is important to highlight these job-related beliefs are significantly different than public school teachers and are worth exploring.

Theoretical and Conceptual Frameworks of Religiosity

The body of knowledge and literature on the theoretical frameworks of religion is infinite. This section describes the challenges of defining religion as well as explores three theories of religion. The theories include the work of Max Weber, John Calvin, and Martin Luther, each of whom in his own way relates religion to man's vocation, or secular calling (Pals, 2006; Thompson, 2000). It also reviews religiosity measurement trends and describes general findings associated with religiosity.

Defining Religiosity

“The difficulties of finding an abstract, transhistorical, and cross-culturally applicable definition of religion have vexed scholars for generations” (Glock & Stark, 1965, p. 3). Because studies of religiosity are continuously emerging, it is not surprising researchers persist in struggling to define this elusive, yet widely used term (Schlehofer, Omoto, & Adelman, 2008). When defining prayer and other spiritual concepts, Hartwick (2004) offered “it is analogous to holding a bird in your hand. To study it, you must hold it just tight enough to prevent it from flying away; however, if you squeeze too hard, you are likely to do it harm” (p. 4).

To many, religion is analyzed and defined by experiences, systems, or orientations—some constructivist in nature, some essentialist in nature, and some encompassing both. For example, Glock and Stark (1965) identified five dimensions of religiosity: experiential, ritualistic, ideological, intellectual, and consequential. Allport and Ross (1967) distinguished between two poles of religious orientation—intrinsic and extrinsic. They characterized these poles by explaining the “extrinsically motivated person uses his religion whereas the intrinsically motivated lives his religion” (p. 434). Worden (2005) defined religion as “a particular

institutionalized or personal system of beliefs, values, and practices relating to the divine—a level of reality or power that is regarded as the ‘source’ or ‘ultimate’ transcending yet immanent in the realm of human experience” (p. 221).

For others, defining the construct is much more difficult. Holdcroft (2006) explained religiosity is difficult to define for two reasons—semantics and perspectives. Dictionaries offer a variety of definitions for religion—some relating it to faith, holiness, or rituals, and others to belief, religiousness, or orthodoxy. One’s perspective may also contribute to the confusion, for theologians, psychologists, and scientists may each offer different explicit definitions (Holdcroft, 2006).

Considering the complexity of this definitional dilemma and general lack of consensus among researchers, Schlehofer, Omoti, and Adelman (2008) suggested further psychometric work be conducted in order to define religious constructs as they are practiced in the real world. This endeavor is beyond the scope of this chapter; however, it is important to select a singular definition for this research study. Because it offers constructivist and essentialist attributes as well as acknowledges the intrinsic and extrinsic religious orientations, this study uses Worden’s (2005) aforementioned definition.

Theories of Religion as Related to Vocation

Pals (2006) reported the most successful businessmen of the early 20th century were those who were intensely religious. These men kept fastidious journals recording their daily efforts to follow God’s will in their lives (Pals, 2006). Until this time, the term vocation (in Latin *vocare*, “to call”) was only assigned to monks, priests, or nuns—not everyday human laborers or otherwise secular workers (Pals, 2006). This section reviews the theoretical tenets of the term

vocation as it relates to one's religiosity and daily work as well as the 20th century theorists commonly associated with this shift in thinking.

Rooted in spiritual and philosophical traditions, Wheatley (2002) described vocation as "work that is given to us, that we are meant to do" (p. 42). She further explained one should not consider the notion of vocation without acknowledging the theology behind it. "We can't talk about vocation or calling without acknowledging that there is something going on beyond our narrow sense of self" (p. 42). Rick Warren (2002) proposed living with a clear purpose focuses a person's life and people "become effective by being selective" (p. 32), and Beth Moore (2004) explained "we can get through almost anything if we know there is a purpose" (p. 13).

Purpose in every-day living is a theory commonly associated with the lives and work of Protestantism's founders, Martin Luther and John Calvin, and further developed by sociologist Max Weber (Pals, 2006; Weber, 1922, 1958). Luther asserted all humans are created equal and specially called by God to their vocations (Pals, 2006). Pals (2006) explained Luther claimed work "should not just be done but done well, as faithful service carried out (in the words of the great Puritan poet John Milton) under 'the great Taskmaster's eye'" (p. 161). Calvin also asserted workers should offer themselves to God through the worldly tasks of working hard, living frugally, and living disciplined lives (Pals, 2006). Recent researchers reported the specific relationship between intrinsic religiosity and perceived purpose in life beliefs (Hui & Fung, 2009) as well as the mediating role purpose in life plays between religiousness and life satisfaction (Steger & Frazier, 2005; Byrk, Lee, & Holland, 1993).

Weber also explained the notion of disciplined living within the everyday world, introducing the term "inner-worldly asceticism" (Weber, 1922, 1958; Pals, 2006). He specifically studied how Protestantism gave rise to capitalism and explained only in this "ethic of

vocation does the world, despite all its creaturely imperfections, possess unique and religious significance as the object through which one fulfills his duties by rational behavior according to the will of an absolutely transcendental god” (Weber, 1922, p. 182).

Few would argue the value of hard work, dedication, and approaching occupational tasks with passion and purpose (Byrk, Lee, & Holland, 1993); however, Palmer (1997) maintained the integrity of teaching must deliberately and thoughtfully encompass the intellectual, emotional, and spiritual paths of the teacher. Hoy (2008) noted the complex tension between a teacher’s altruistic call to serve and the challenges of today’s classrooms. Researchers analyzing and measuring the inner landscape and motivations of the teacher join a group of research already in progress and requires researchers to choose between creating their own measurement instruments specifically designed for educators or selecting instruments from the field of religious measurement and applying them to the field of education (Coffron, 2008; Fawns, 2006; Hartwick, 2004; Palmer, 1993, 1997, 1998, & 2003; Suhor, 1998-99).

Research Methods in Measuring Religiosity

For researchers in the field of religion, there are many reliable measurement instruments from which to choose (Gorsuch, 1984). Gorsuch (1984) explained because religious researchers have refined measurement practices for many years, they now work within a strong measurement paradigm purported to be a strong predictor of behavior. Harvard professors Allport and Ross (1967) created one of the most commonly referenced measurement scales, The Religious Orientation scale. It was introduced in an article investigating the relationship between religion and prejudice. The survey categorizes religion into two orientations, intrinsic and extrinsic, explaining, “the extrinsically motivated person uses his religion, whereas the intrinsically

motivated lives his religion” (Allport & Ross, 1967, p. 434). Seldom does a person orient to just one pole, for most people who consider themselves religious fall on the continuum between the intrinsic and extrinsic poles (Allport & Ross, 1967).

Since its introduction in 1967, the Religious Orientation scale has undergone several modifications; however, one version, the Age Universal I-E scale, stands alone as the dominant measurement scale in the field (Allport & Ross, 1967, Gorsuch & Venable, 1983; Gorsuch, 1984; Kirkpatrick & Hood, 1990; Glover, 1997, Gordon et al., 2008). Researchers consider this scale versatile, and it has been used to study the relationship between religious motivations and such phenomenon as forgiveness, social pressures, depression, and anxiety, and religious orientation (Gordon et al., 2008; Khan, Watson, & Cothran, 2008).

Gorsuch (1984), however, acknowledged the limitations of using a questionnaire to measure religious phenomena, encouraging researchers to explore more open-ended questions and more “personalistic approaches” (p. 235). Other researchers suggested improving the Age-Universal I-E scale by adding one or two additional dimensional factors, restricting the use of the measure to religious persons, and adjusting the response format from 5-point Likert-type scale to a 3-point Likert-type scale (Maltby, 2002). While these proposals may inspire a dynamic discussion, exploring the effectiveness of these suggestions are beyond the scope of this study.

General Findings with Respect to Religiosity

Because the religiosity measurement paradigm is refined and purported to be a strong predictor of behavior, the relationship between the two constructs is frequently applied to the health field (Gorsuch, 1984; Levin 2001; Myers, 2000). Authors Neal Krause (2003, 2004),

Harold Koenig (1999, 2008), and Jeff Levin (2001) are well known for researching and reporting the medical benefits of religion, prayer, and spirituality.

Prayer and religious involvement provide comfort, meaning and hope during times of adversity (Bruning, 2000; Krause, 2004; Levin, 2001; Pargament, 1997). Religion and prayer have also been linked to activating a healing energy in the human body, promoting prevention and treatment of diseases, and they are often associated with lower rates of depression (Krause, 2004; Levin, 2001). Furthermore, Koenig (1999) reported religious people have healthier lifestyles, cope well with stress, and live longer, more satisfying lives. Koenig (2008) cautioned, however, although religious involvement and medical care work well together (particularly in the treatment of cardiovascular disease), “when one or the other is excluded, patient outcomes will probably suffer” (p. 128).

Allport and Ross (1967) recommended social scientists distinguish between religiosity and religious attitudes. Religious attitudes such as intrinsic and extrinsic orientations help to “know the role religion plays in the economy” of one’s life (Allport & Ross, 1967, p. 442). Intrinsic and extrinsic religious orientations are purportedly excellent measures of religious commitment and represent one’s approach to religiousness (Allport & Ross, 1967; Bergin, Masters & Richards, 1987; Donahue, 1985; Baker & Gorsuch, 1982). Intrinsic religious sentiments include viewing religion as a way of life, a meaning system or framework through which all life is understood (Donahue, 1985). Extrinsic religious sentiments, in contrast, serve as a comfort, a self-serving approach one may adopt to obtain security, solace, or social benefits (Donahue, 1985; Hunt & King, 1971). Allport (1963) explained intrinsic orientation is a means for healthy living, while extrinsic religiousness is a “defense against anxiety” (p. 194).

Intrinsic orientation is positively correlated to internal locus of control (Kahoe, 1974; Strickland & Shaffer, 1971), purpose in life (Crandall & Rasmussen, 1975), intrinsic motivation and responsibility (Kahoe, 1974), and trait anxiety (Baker & Gorsuch, 1982; Bergin, Masters & Richards, 1987). It is also related to better personality functioning, self-control (Bergin, Masters, & Richards, 1987), ego strength, integrated social behavior, insecurity (Baker & Gorsuch, 1982), and depressive symptoms (Smith, McCullough, & Poll, 2003).

Donahue (1985) explained intrinsic religious orientation is often correlated with measures of religiosity or religious beliefs, while extrinsic orientation is not. Because extrinsic orientation treats religion as one of many life influences or sources of support and comfort, it does not correlate with other measures of religious beliefs and commitments (Donahue, 1985).

More specifically, the act of prayer was associated with self-esteem, job satisfaction, and efficacy beliefs (Krause, Chatters, Meltzer, & Morgan, 2000; Hartwick, 2004). Krause (2004) noted although there is little research on prayer expectancies and beliefs, people who lead prayerful lives have more self esteem and reported greater self worth than adults who do not expect results from prayer. Ai, Peterson, Bolling, & Koenig (2002) reported private prayer as a predictor of optimism, affect, and older age. Krause et al. (2000) explained group prayer participants reported greater prayer efficacy than those who prayed alone. Additionally, people felt more efficacious when others pray on their behalf (Krause et al., 2000).

The Pew Forum on Religion and Public Life (2008) reported 56% of Americans pray each day, 56% classified religion as “very important” in their lives, and 84% affiliated themselves with a specific religious denomination. Interestingly, qualitative and quantitative researchers reported religion becomes more important later in life (McFadden & Kozberg, 2008). McFadden and Kozberg (2008) explained older people “identify their faith as their most

important support for coping with the trials and tribulations of aging” (p. 8). Furthermore, the findings of Argue, Johnson, and White (1999) supported “a traditional or developmental model of religiosity and age,” suggesting “aging per se is associated with an increase in religiosity independent of family life course events” (p. 433).

Hartwick (2004) reported 87.2% of teachers who prayed agreed the practice helps them to be more reflective and introspective in the classroom, and he suggested expanding research in the area of spiritual cognition to better understand how spiritual practices, such as prayer or meditation, affected teachers’ professional lives. Bruning (2000) stated meditation and prayer help teachers remain peaceful during the school day, while other researchers and educators reported the spiritual dimension of leadership, teaching, and learning (Garner, 2007, Kessler, 2000, Houston & Sokolow, 2007, Palmer, 2003, 1998, Suhor, 1998-99, Campbell, 2003). These studies, however, do not specifically address the question of whether or not teachers’ religious orientation is related to efficacy beliefs.

Teachers and Religiosity

Again, little research exists about effects of spirituality and religion on the professional lives of school teachers (Fawns, 2006; Hartwick, 2004, Williams, 2001). Because this study will measure the efficacy beliefs and religious orientation of both public and private school teachers, it is important to understand the generalizability of the findings and applicability of the recommendations as they may or may not relate to public schools. The following section provides an overview of the Constitutional rights of teachers as well as reviews an emerging topic in the field of educational research—the relationship between spirituality and education.

Constitutional Rights

It behooves public educators to understand a teacher's role both as an individual and as a state agent, teachers' freedom of speech rights, and how to present classroom material that may be perceived as religious or spiritual in nature. Furthermore, public school administrators should understand how the law restricts the ways administrators express their religious beliefs, for they do not want to give the impression they are promoting religion or proselytizing employees. This section outlines the various ways the free exercise clause, First Amendment, and the Equal Access Act affect religion in both secular and private schools.

In a secular setting, the topic of religion in schools continues to be litigious and debatable, and teachers and administrators find themselves "in a unique position to inculcate values for the next generation" while working within the limits of the law (Staver, 2005). Clearly, public school employees enjoy fewer religious rights than students. The United States Supreme Court (*Tinker v. Des Moines Independent School District*, 1969) explained "It can hardly be argued that either students or teachers shed their constitutional rights to freedom of speech or expression at the schoolhouse gate," but because teachers are often seen as an "extension of the state," they cannot participate in religious activities (thus establishing religion or perhaps even proselytizing a religious viewpoint) while serving in their official capacities (Staver, 2005). In *Pelozo v. Capistrano Unified School District*, 1994, the court explained "restrictions on public school teachers' speech is justified when there is a compelling governmental interest in avoiding a constitutional violation" (McDowell, 2007).

The First Amendment guarantees, "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof" and provides two important guarantees: the establishment clause and the free exercise clause. The former prohibits the

Congress from establishing a national religion, while the latter prohibits the government preference of one religion over another. In *Everson v. Board of Education of Ewing*, 1947, the establishment clause was applied to the state through the due process clause of the Fourteenth Amendment, and the court relied heavily on Thomas Jefferson's metaphorical approach, "a wall of separation between Church and State," to define religious establishment. Although Barton (2000) argued Jefferson's statement was taken out of context and did not reflect the original intent of the Constitution, the Supreme Court ruled on a number of religious liberties cases involving education, including *McCullum v. Board of Education*, 1948, which found religious education during the school day in public schools to be unconstitutional (Barton, 2000). Fourteen years later, the Court found public school prayer and scripture recitation to be unconstitutional (*Engel v. Vitale*, 1962 and *School District of Abington Township v. Schempp*, 1963), and these cases helped define what was taught concerning religion during a public school student's day. Several cases addressed the concepts of evolution and creationism, including *Epperson v. Arkansas*, 1968, *McClellan v. Arkansas*, 1981, and *Edwards v. Aguillard*, 1987.

During this time, *Lemon v. Kurtzman*, 1971, further addressed religion by establishing a three-pronged test, later coined the "Lemon Test." If one or more prongs are violated, the government's, or school's, action is deemed unconstitutional. The three prongs are as follows:

1. The government's action must have a legitimate secular purpose;
2. The government's action must not have the primary effect of either advancing or inhibiting religion;
3. The government's action must not result in an "excessive government entanglement with religion."

The *Lemon* case dealt with the government funding of private, mostly religious, schools; however, the *Lemon Test* remains broadly applied today, mainly serving to ensure schools do not inhibit nor advance religion.

Using *Lemon* as a guide, the courts began to rule on other controversial cases, such as *Stone v. Graham*, 1980, in which the Supreme Court found mandatory posting of privately donated Ten Commandment posters was unconstitutional. Because it has no secular legislative purpose, the Court also found an Alabama law requiring a one-minute period of “silent meditation or voluntary prayer” to be unconstitutional (*Wallace v. Jaffree*, 1985).

Soon after, student-led prayers were challenged. Cases such as *Lee v. Weisman*, 1992, *Jones v. Clear Creek Independent School District*, 1992, and *Santa Fe Independent School District v. Doe*, 2000, seem to contradict each other, but the Court concluded student-led, student initiated prayer at football games violates the establishment clause.

These important cases provide a glimpse into the litigious nature of religion and public schools, and these issues continue to spawn new litigation. Teachers may find these cases disconcerting, for even the courts admit “the determination of what is a religion or a religious belief “is more often than not a difficult and delicate task” and “few tasks that confront a court require more circumspection than that of determining whether a particular set of ideas constitutes a religion” (*Thomas v. Review Board of the Indiana Employment Security Division*, 1981; *Africa v. Pennsylvania*, 1981). On one hand, teachers may not post year-round banners stating historical yet religious phrases in the classroom, but on the other hand, the courts permit teachers to “take a knee” and silently bow their heads during a student-initiated prayer (Tufaro, 2007). In the meantime, teachers must interpret information gleaned from school district policy, research, media, and from the courts in order to best meet the needs of their students. If teachers feel connecting “spiritually” with their students or other faculty members will positively affect student learning, then they should ensure their personal theology and religious viewpoints are privately held during this process.

In addition to maintaining a neutral, non-proselytizing relationship with students, secular school teachers should foster the same relationship with other teachers and administrators. This means employees cannot be encouraged or coerced to participate in activities intended to advance or establish religion; however, they can voluntarily participate when not serving in their official capacities as public employees. This may pose several dilemmas for educators studying the writings of Palmer (2003, 1998), Kessler (2000), or Houston and Sokolow (2007), for the suggested discussion topics and group exercises involve religious self-reflection and encourage professional dialogue exploring whether teachers' spiritual and religious schemas affect student learning. This may not be legal during school hours, and administrators encouraging such book studies and dialogue may be violating the establishment clause.

While public schools must hire employees and accept students regardless of their religious beliefs, private schools have the freedom to consider religious beliefs when accepting students and hiring employees. Oftentimes private schools are owned and operated by religious bodies or boards of trustees operating independent of most government; furthermore, because they receive no public funds, they are not at risk of violating the constitutional rights of employees or students (Alt & Peter, 2002).

The Spirit of Education: An Ongoing Discussion

Despite the litigious nature of entangling church and state, many researchers suggested schools increase practices to support teachers emotionally as well as spiritually (Richards, 2005; Palmer, 1998; Campbell, 2003). This section reviews the works of authors such as Parker Palmer, James Hartwick, and Rachel Kessler, each of whom have explored the spiritual and

religious lives of teachers. It also provides an overview of the research describing the relationship between leadership and spirituality.

For the past three decades, Parker Palmer has explored the spiritual dimension of education and the relationship between one's work and purpose in life beliefs. From both the student and teacher perspectives, his writings outline how teachers best connect with their students. Palmer (1998) asserted "good teaching cannot be reduced to technique; good teaching comes from the identity and integrity of the teacher" (p. 10). Palmer (1993) further explained only through adopting spiritual disciplines, such as including sacred texts as curricular resources for history and literature courses, participating in personal prayer and meditation, and fostering communities of fellowship and reflection, will teachers improve their practices. Parker (1993) described our educational system as being reliant on "abstract and impersonal facts and theories" and explains a more spiritual approach will shift from knowing the "world not as simply as an objectified system of empirical objects in logical connection with each other, but as an organized body of personal relations and responses, a living and evolving community of creativity and compassion" (Palmer, 1993, p. 14).

Throughout his writings, Palmer (1993, 1998) suggested spirituality can transform the way teachers approach pedagogy; more specifically. Hartwick (2004) explored the work of Palmer (1993) in his investigation into the emotional and spiritual needs of Wisconsin public school teachers and explained teacher spirituality may determine the extent to which they use cooperative, student-centered approaches. His 2003 survey, entitled the "Teacher Spiritual/Religious Survey" (TSR Survey), detected a small correlation between spiritual and religious domains and professional factors, such as teacher job satisfaction and efficacy (Hartwick, 2004). He reported a gap in the literature exploring the religious and spiritual lives of

teachers and suggested using his data as a guide to more specifically examine how prayer, religion and spirituality affect teachers' effectiveness in the classroom (Hartwick, 2004).

Hartwick's (2004) recommendations included developing spirituality and education courses for pre-service teachers and providing public school sacred spaces, much like the chapels in public hospitals, where teachers can reconnect spiritually during the school day. He also suggested creating teacher and administrator formation retreats, such as those inspired by Palmer's 1998 book, *The Courage to Teach*. This approach purports effective, rich teaching methods flow from the identity and integrity of the teacher, and the formation process assists teachers in rediscovering their calling to education. In turn, these actions will renew a teacher's spirit and revitalize education (Intrator, 2002).

In the book, *The Soul of Education: Helping Students Find Connection, Compassion, and Character at School*, Kessler (2000) explained "many teachers have tried to be so vigilant about keeping religion out of the classroom that they have unknowingly violated the rights of their students" (p. xiv). Her book explores different ways public school educators can "welcome the soul into the classroom" and "honor the First Amendment without abandoning our children's spiritual development" (Kessler, 2000, p. xiv). Kessler also suggested, however, students should ponder the question, "What's God's will for my life" among other goal setting and purpose in life questions so teachers "create opportunities at school for students to articulate these frames of meaning" and "substantially contribute to their spiritual development" (Kessler, 2000, p. 58-59).

Timothy Wineberg (2008) explained only through developing their moral sensibilities are teachers prepared to meet the demands of their vocation. He outlined five roles of the teacher—a servant, a moral friend, a mentor, a covenantor, and a moral companion, carefully outlined in order to "identify the central ethical spheres or categories in which personal-professional

formation occurs” (Wineberg, 2008, p. 8). He explained, “for when work is tackled with a sense of vocation, individuals enjoy a sense of satisfaction, meaning, and identity that buoys them up and sustains them in their labours” (Wineberg, 2008, p. 13).

Garner (2007) devoted an entire chapter of her book to the spiritual dimensions of learning, explaining “by not addressing this issue, we risk overlooking not only key impediments to learning, but also important ways we might help particular students learn more effectively” (p. 133). She provided a reflection guide for teachers to use in order to “challenge them to consciously examine their own personal values and beliefs and reflect on how these directly and indirectly affect how they think and act.” One reflection prompt inquires, “What is my relationship with God, with others, and with myself?” (2007, p. 145).

Similar to the discussion of spirituality and education, educational leaders are also turning to models fostering the spiritual dimension of leadership. Robert Greenleaf is best known for introducing the theory of servant leadership in the 1970s. Since that time, his work has inspired research reporting the value of managing employees with respect, honesty, and service. Greenleaf (1977) explained “the great leader is seen as a servant first, and that simple fact is the key to his greatness” (p. 7). While Greenleaf (1977) highlighted the catalysts of leadership change (individuals, churches, and institutions such as schools and universities), more recent authors have outlined practical implementation methods for leaders. This includes Autry (2001) who posed the question, “How does your spirituality find expression in the workplace, in your attitude about your work, in your relationships with your employees, peers, colleagues, customers, vendors, and others?” (p. 8). Autry (2001) acknowledged one should distinguish spirituality at work from personal spirituality; however, he explained they are both derived from the same source.

School administrators can also look to recent authors who report the role religion and spirituality plays in leadership. For example, Solomon and Hunter (2002) encouraged educational leaders to ponder the role meaning systems play in their organizations as a valid way of conceptualizing and approaching work, and Houston and Sokolow (2007) explored the spiritual dimension of leadership, describing eight spiritual principles fostering life-sustaining and life-enhancing ways of thinking and working. Thompson (2000) asserted leaders must understand, when approaching work, there is a “growing search for meaning in the midst of chaos and complexity—the growing need for a sense of connectedness and purpose in the events of our outer lives and the deeply ultimate source of meaning and value, by whatever name called” (p. 212). Through embracing the spiritual side of work and organizational life, Thompson (2000) explained we will fulfill one of our most basic human needs—coherence between our purpose and our work.

Summary

This chapter established a theoretical framework through which to justify an examination of the relationship between teacher religiosity and teacher efficacy. It reviewed literature related to defining self-efficacy and teaching efficacy, provided an explanation of measurement approaches and summarized recent general findings related to teacher efficacy. Additionally, theories of religiosity were reviewed, the concept of vocation explored, and general findings related to religiosity were reported. Finally, recent literature devoted to exploring the relationship between spirituality and education was reviewed.

With so many studies and publications describing the value of connecting one’s spiritual and inner life to the workplace, it is apparent a research gap exists as it relates to teacher

religiosity. Following Calvin and Luther's assertions, teachers who view their work as a calling from God and consider it religiously significant may actually hold different teaching efficacy beliefs. The following chapter presents the methodology proposed to investigate the relationships between teachers' perceived levels of religiosity and their efficaciousness in the classroom.

CHAPTER 3

METHODOLOGY

The purpose of this study is to describe the relationship between teachers' religious orientation and their efficaciousness as measured by the Age Universal I-E scale and the Teachers' Sense of Efficacy Scale (TSES). This chapter describes the methodology of this study, presenting the guiding research question, explains the research design, and reviews the population and sample. Finally, it describes the instrumentation, data collection, and data analysis methods.

Research Question

Data collected from the Age Universal I-E scale and the TSES will be used to address the following research question: "Which variables are most salient in predicting teacher efficacy?"

Research Design

This research used descriptive and inferential statistics to explore the relationship between teachers' religious orientation and teacher efficacy. It included measures of normality as well as examined outliers and calculated variance to analyze the data set. In addition, the study utilized multiple regression analysis and reported effect sizes, beta weights, and structure coefficients to determine whether teacher religiosity is a better predictor of teaching efficacy than other teacher characteristics.

Gall, Gall, and Borg (2007) suggested researchers respect participants' privacy and anonymity when collecting sensitive or highly personal information; therefore, participants in this study were given the opportunity to complete the survey and anonymously submit it

electronically or submit it by mail. The study assumed teachers felt comfortable being honest and forthright in their personal perceptions and responses in order to minimize the possibility of “halo error,” defined as “a disposition to attribute socially desirable characteristics to oneself” (Anusic, Schimmack, Pinkus, & Lockwood, 2009, p. 1144). Another assumption was the participants understood the survey’s instructions and questions, minimizing confusion or item misinterpretation.

The study employed a sample of elementary, middle, and high school teachers from two private Christian schools serving students grades pre-school through twelfth grade in Western Washington and four elementary schools serving kindergarten through grade five, one middle school serving grade six through grade eight, and one high school serving grade nine through grade twelve from a public school district in North Texas. This sample sets this study apart from other related studies, as researchers such as Hartwick (2004) and Egger (2006) focused on either the public or private sectors, but not both.

Instrumentation

The study used the TSES to measure three categories of teacher efficacy. This 24-item Likert-scale survey addresses teachers’ strengths and challenges and the external constraints of classroom management, planning instruction, and student engagement (see Table 1) (Tschannen-Moran & Hoy, 2001, p. 800). Permission to use the TSES is granted by Anita Woolfolk Hoy (http://people.ehe.ohiostate.edu/ahoy/files/2009/02/permission_letter.pdf). Public school data was coded “1” and private school data was coded “2.”

Table 1

TSES Subscale Factor Items

Factor	Item #
Efficacy in Student Engagement	1, 2, 4, 6, 9, 12, 14, 22
Efficacy in Instructional Strategies	7, 10, 11, 17, 18, 20, 23, 24
Efficacy in Classroom Management	3, 5, 8, 13, 15, 16, 19, 21

Efficacy in student engagement measures a teacher’s ability to meet students’ academic needs in creative, individualized ways and includes such items as “How much can you do to get through to the most difficult students?” and “How much can you do to get students to believe they can do well in school work?” *Efficacy in instructional strategies* measures a teacher’s ability to manage pedagogical decisions and includes items such as, “How much can you do to adjust your lessons to the proper level for individual students?” and “How well can you respond to difficult questions from your students?” *Efficacy in classroom management* measures a teacher’s ability to establish rules, maintain routines and procedures, and manage student behavior, and it includes survey items such as, “How well can you establish a classroom management system with each group of students?” and “How well can you keep a few problem students from ruining an entire lesson?” (Tschannen-Moran & Hoy, 2001, p. 800).

Data collected from the TSES is intended to guide administrators as they design and guide professional development opportunities for their teachers and is considered a reliable and commonly used measure of teacher efficacy. Table 2 presents the overall internal consistency reliability coefficients for the TSES as well as the efficacy subscales reliabilities for student engagement, instructional strategies, and classroom management (Tschannen-Moran & Hoy, 2001).

Table 2

TSES Reliabilities

Factor	Alpha
Efficacy in Student Engagement	.87
Efficacy in Instructional Strategies	.91
Efficacy in Classroom Management	.90
Overall Efficacy	.94

Note. 9-point Likert scale ranging from *Nothing* to *A great deal*

Recent research has revealed consistent reports of internal consistency, including overall coefficient alphas of .939 in a study investigating the relationship between teaching efficacy and principals' leadership behaviors (Ryan, 2007), .936 in a study of beginning teachers' efficacy (Atay, 2007), and .93 in a study of antecedent self-efficacy beliefs of novice and experienced teachers (Tschannen-Moran & Hoy, 2007). The study reported a measure of reliability for this sample to provide an additional validity measure for which to compare to other studies' samples.

The study also used the Age Universal I-E scale (Gorsuch & Venable, 1983) intended to assess religious motivations. This 20-item Likert-scale survey measures two poles of religiosity, the intrinsic orientation and the extrinsic orientation, and is derived from the Religious Orientation Scale (Allport & Ross, 1967), the most well-known measure of religious attitudes and behaviors (Gorsuch, 1988). Intrinsic orientations involve the deeply personal and private belief systems of a person, while extrinsic orientations are more associated with seeking protection, consolation, or social benefits inherent of religious rituals, group fellowship, and religious memberships or associations (Allport & Ross).

Table 3

Age Universal I-E Scale Subscale Factor Items

Factor	Item #
Extrinsic Orientation	1, 2, 3, 4, 8, 10, 13, 14, 15, 17, 18, 20
Intrinsic Orientation	5, 6, 7, 9, 11, 12, 16, 19

The Age-Universal I-E scale measures intrinsic religious orientation through scale items such as “It is important to me to spend time in private thought and prayer” and “I try hard to live all my life according to my religious beliefs.” The scale measures the extrinsic orientation through such questions as, “What religion offers me most is comfort in times of trouble and sorrow,” “I go to church because it helps me to make friends” and “Sometimes I have to ignore my religious beliefs because of what people might think of me” (Gorsuch & Venable, 1983, p. 184).

Table 4 presents the internal consistency reliability coefficients for the Age Universal I-E as obtained through two studies conducted by Gorsuch and Venable (1983). In a 2008 study of religious orientation, forgiveness, and social pressures, Gordon et al. (2008) noted respective reliabilities of .62 and .77 for extrinsic and intrinsic orientations. Another recent study reported extrinsic and intrinsic reliabilities of .57 and .61 when examining religious orientation, depression, and anxiety (Khan, Watson, & Cothran, 2008). The study also calculated a measure of reliability for comparison purposes. Permission to use the Age Universal I-E scale was granted by electronic communication from Richard Gorsuch on February 11, 2010.

Table 4

Age Universal I-E Scale Reliabilities

	Extrinsic alpha	Intrinsic alpha
Study 1	.66	.73
Study 2	.75	.68

Note. 5-point Likert scale ranging from *strongly disagree* to *strongly agree*

Teachers' demographic information was collected on a form and included campus type (public versus private religious), gender, grade level taught, teacher age, and years of classroom teaching experience.

Data Collection

School superintendents and principals were contacted in March, 2010 to obtain permission to send survey packages to their campuses. Because of the sensitive nature of the constructs being measured, specific campuses were selected based on principals' availability and willingness to participate in the survey. Permission to survey teachers was obtained from campuses employing a combined total of 595 teachers – 195 teachers from private schools and 400 teachers from public schools.

Each participating campus received survey packets for each teacher. The packet included a cover letter with informed consent information, a general overview outlining the significance and importance of the study, and an electronic link to the online version of the survey. Attached to the cover letter was a paper copy of the demographic form, survey instruments and a pre-addressed postage-paid envelope. The survey packet also included a small token of gratitude for participation in the study (a pencil with the inscription, "I touch the future. I teach. Christa

McAuliffe”). Campus administrators were given a gift card to Starbucks as an additional expression of appreciation for participating in the survey process.

Approval from the Institutional Review Board at the University of North Texas was obtained in April, 2010 (see Appendix A). The surveys were collected during April and May, 2010, and the data collection period ended in June, 2010. Data were collected from 73 private school surveys and 159 public school surveys, representing an overall survey return rate of 39%.

Data Analysis

Descriptive statistics for comparison and interpretation purposes were calculated, including instrument reliability and an analysis of kurtosis and skewness. These tests assessed the internal consistency of the data compared to previous studies as well as determined how normally the data was distributed. Finally, the data were examined for outliers as well as for the presence of multicollinearity issues.

To address the research question, data gathered from the teacher participants were loaded into a statistical software program, Predictive Analytics SoftWare (PASW) version 18, to determine the relationship between teacher efficacy and teacher characteristics. Data coding is presented in Table 5. Multiple regression analysis including a thorough examination of effect sizes, beta weights, and structure coefficients were conducted in order to determine which characteristics best predict teacher efficacy.

Table 5

Data Coding

Variable	Type	Value
Campus Type	Public	1
	Private	2
Gender	Male	1
	Female	2
Grade Level Taught	Prekindergarten - Grade 5	1
	Grade 6 - Grade 8	2
	Grade 9 - Grade 12	3
Teacher Experience Level	0-3 years	1
	4-7 years	2
	8-11 years	3
	12-15 years	4
	16-19 years	5
	20-23 years	6
	24-27 years	7
	More than 28 years	8
Teacher Age	21-25 years old	1
	26-30 years old	2
	31-35 years old	3
	36-40 years old	4
	41-45 years old	5
	46-50 years old	6
	51-55 years old	7
	56-60 years old	8
	61-65 years old	9
	66-70 years old	10
	71-75 years old	11
	Over 75 years old	12

Summary

This chapter described the methodology used to measure the relationship between teachers' religious orientation, efficacy beliefs, and teacher demographics as measured by the TSES, the Age Universal I-E scale, and a teacher information form. The chapter also restated the research question, explained the research design, and reviewed the population and sample. Finally, it described the instrumentation and data collection methods. The following chapters report the collected data and present an analysis describing the predictive power of teacher characteristics on teacher efficacy.

CHAPTER 4

STUDY FINDINGS

The purpose of this chapter is to report the findings of the study, including a description of the sample participants, an assessment of the data collected, and an analysis of the data. This includes descriptive statistics, instrument reliability, and inferential statistics. More specifically, the chapter reports multiple regression results used determine whether religious orientation is a better predictor of teaching efficacy than teacher demographics.

Description of Sample Participants

During April and May, 2010, 595 survey packets were delivered to participating campuses and distributed to teachers by campus administrators. Study participants included teachers from elementary, middle, and high schools from private Christian schools serving pre-school through twelfth grade in Western Washington and four elementary schools serving kindergarten through grade five, one middle school serving grade six through grade eight, and one high school serving grade nine through grade twelve from a public school district in North Texas. 237 surveys were returned, 180 of which were paper surveys and 57 were online surveys. Because of missing data, 5 paper surveys were omitted from the study. Several survey item variables were also missing data; however, because no more than 5% were missing and appeared to be random, the values were replaced with the mean of the scores from the associated variable (Tabachnick & Fidell, 2001). In the end, data were obtained from 232 surveys, a return rate of 39%. 159 (69%) were from public school teachers and 73 (31%) were from private school teachers. Data were downloaded into PASW version 18 to calculate descriptive and inferential statistics.

Tables 5, 6, and 7 present frequency data related to participants' campus type, grade level, gender, experience level, and age.

Table 6

Teachers' Campus Type, Grade Level, and Gender

Campus Type	PK-5	6-8	9-12	Male	Female	Total
Public	94	7	58	15	144	159
Private	26	22	25	20	53	73
Total	120	29	83	35	197	232

Table 7

Teacher Experience Level by Campus Type

Campus Type	0-3 years	4-7 years	8-11 years	12-15 years	16-19 years	20-23 years	24-27 years	> 28
Public	11	27	25	31	20	9	20	16
Private	7	11	15	10	6	8	4	12
Total	18	38	40	41	26	17	24	28

Table 8

Teacher Age by Campus Type

Campus Type	21-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65	66-70	71-75
Public	5	14	13	33	14	27	25	18	9	1	0
Private	4	9	7	8	3	9	14	7	9	2	1
Total	9	23	20	41	17	36	39	25	18	3	1

Data Assessment

Table 8 presents the mean, standard deviation, skewness and kurtosis statistics of data collected from the Teachers' Sense of Efficacy Scale (TSES) and the Age Universal I-E scale. Overall efficacy scores from the TSES represent the dependent variable, and two factor scores (intrinsic religious orientation and extrinsic religious orientation) from the Age Universal I-E scale represent independent predictor variables. Skewness and kurtosis of the data were calculated to determine whether or not the data was normally distributed. As shown in Table 8, the kurtosis values for efficacy and extrinsic orientation were both near zero, indicating a normal distribution; however, the kurtosis value for intrinsic orientation was 2.71. This showed data were clustered around the mean and more "peaked" than normally distributed data, presenting a leptokurtic, or less variable distribution (Salkind, 2004). The skewness values for teacher efficacy and extrinsic orientation are also near zero, but the intrinsic orientation value was -1.53. This indicated participants scored slightly higher on the intrinsic religiosity survey items when compared to the median score, thus creating a slight negative skew or "tail." Although the kurtosis and skewness values for intrinsic religiosity were slightly different than the efficacy and extrinsic religiosity values, the differences were minimal and warranted no data transformations.

Table 9

Descriptive Statistics of Study Variables

Variable	Mean	Median	SD	Kurtosis	Skewness
Efficacy	7.39	7.42	0.78	-0.74	-0.07
Intrinsic Orientation	4.06	4.25	0.81	2.71	-1.53
Extrinsic Orientation	1.80	1.81	0.38	-0.57	0.24

Standardized residual scores were calculated to determine the existence of outliers. Table 9 presents eight cases with scores found to be outside two standard deviations, ranging from -2.546 to -2.031 and 2.139 and 2.506. These cases were included in the analysis, as there was no statistical justification to remove them from the study. Furthermore, there was no theoretical reason to conclude their inclusion in the study was inappropriate or their responses unrepresentative of the population.

Table 10

Standardized Residuals

Case Number	Std. Residual
40	-2.438
42	-2.108
65	-2.546
139	2.506
141	-2.090
150	2.165
156	2.139
203	-2.031

In order to rule out violations of linearity and homoscedasticity, data were placed on a scatter plot, Figure 1, to compare standardized residuals and predicted values. Although the plots did not present a strong linear relationship, there was no evidence of bell-shaped (non-linear) or cone-shaped (heteroscedastic) data plots; therefore, items variances were acceptable, and the relationship between the variables was considered linear.

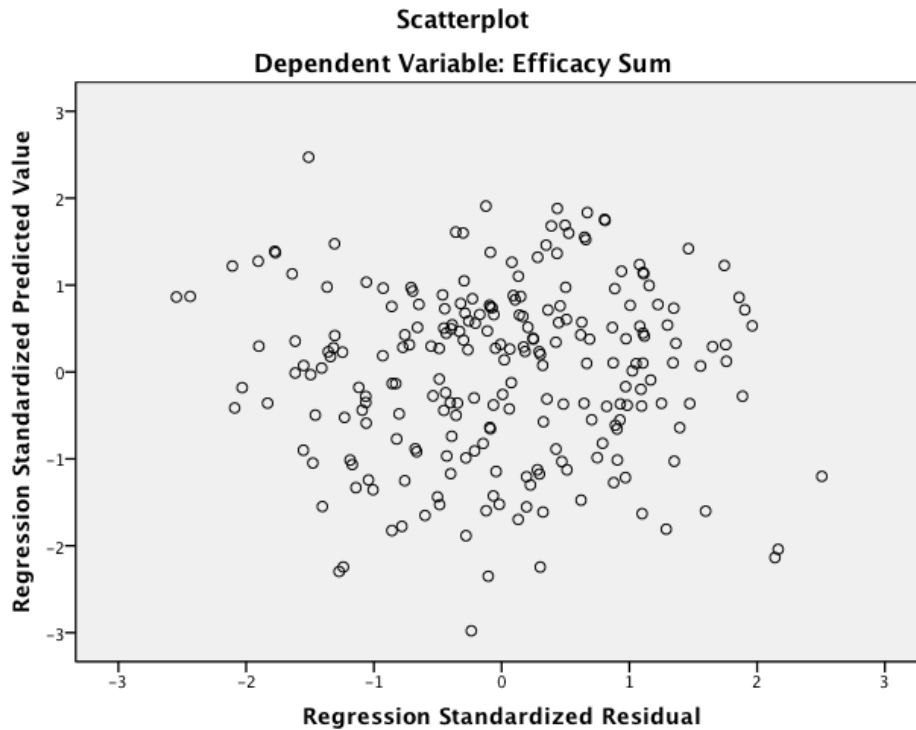


Figure 1. Comparison of standardized residual scores and predicted values.

Cronbach's alpha was used to measure internal consistency and determine to what degree the instruments measure the constructs of efficacy and religious orientation. Because alpha coefficients of +1.00 indicate perfect reliability and alpha coefficients of zero indicate no reliability, higher alpha scores are more favorable than those closer to zero (Salkind, 2004). Table 10 presents the coefficient alpha ratings for the TSES data collected in this study. Alpha coefficients for the TSES were calculated to be .96, and each factor was calculated separately and found to be .89 (Efficacy in Student Engagement), .90 (Efficacy in Instructional Strategies), and .93 (Efficacy in Classroom Management). These calculations are similar to previous studies' reports of overall efficacy coefficient alpha ranges from 0.93 to 0.939 (Atay, 2007; Ryan, 2007; Tschannen-Moran & Hoy, 2007). Alpha coefficients were calculated for the Age Universal I-E scale, reporting a .88 alpha for Intrinsic Orientation and .70 for Extrinsic Orientation. These findings were higher than previous studies' reporting alpha ranges from .57 to .62 (Extrinsic

Orientation) and .61 to .77 (Intrinsic Orientation) for the Age Universal I-E scale (Gordan et al., 2008; Khan, Watson, & Cothran, 2008). Because the alpha coefficients were similar to or higher than previous studies' calculations, both the TSES and the Age Universal I-E scales were deemed acceptably reliable instruments for use in this study.

Table 11

Cronbach's Alpha for TSES and Age Universal I-E Scale

Variable	Alpha
Efficacy in Student Engagement	0.89
Efficacy in Instructional Strategies	0.90
Efficacy in Classroom Management	0.93
Overall Efficacy	0.96
Intrinsic Orientation	0.88
Extrinsic Orientation	0.70

When using multiple regression analysis, it is important for a researcher to test for multicollinearity to determine whether predictor variables are too closely related to each other. Table 11 presents collinearity statistics for the independent variables (campus type, gender, grade level taught, years of experience, teacher age, extrinsic religious orientation, and intrinsic religious orientation). Multicollinearity exists when VIF is greater than 10 and Tolerance is below 0.1. Correlation coefficients were examined between variables and found to be acceptable, as collinearity statistics revealed no multicollinearity.

Table 12

Collinearity Statistics for Study Variables

Predictor Variable	Tolerance	VIF
Campus Type	0.753	1.329
Gender	0.795	1.257
Grade Level	0.822	1.216
Teacher Experience	0.459	2.178
Teacher Age	0.455	2.198
Extrinsic Religious Orientation	0.884	1.131
Intrinsic Religious Orientation	0.801	1.249

Data Analysis

The research question explored the predictive power of teachers' religious orientation and teacher demographics on efficacy beliefs. Teachers' sense of efficacy and teachers' perceptions of their religiosity were measured by the TSES and the Age Universal I-E scale, and the participants completed an information form indicating their gender, grade level taught, their age, their experience level, and the campus type (public versus private religious). Table 12 presents a correlation matrix indicating statistically significant relationships among several predictors of teacher efficacy, including teacher religious orientation, age, gender, experience level, grade level taught, and campus type (public versus private religious).

Standard multiple regression analysis was used to test the relationship between the predictor variables' and the dependent variable, teacher efficacy; additionally, beta weights and structure coefficients were calculated to help interpret the results. The model summary is presented in Table 13, and the regression results are presented in Table 14.

Table 13

Summary of Correlations Between Study Variables (n = 232)

Variable	C	G	GL	EL	A	E	EO	IO
C								
G	-.233**							
GL	.107	-.387**						
EL	.003	-.144*	.125					
A	.059	-.138*	.160*	.730**				
E	-.046	.019	-.123	.173**	.210**			
EO	-.280**	.199**	-.153*	-.050	-.122	-.041		
IO	.404**	-.065	-.051	.134*	.147*	.149*	-.163*	

Note. C = campus type; G = gender; GL = grade level; EL = experience level; A = age; E = efficacy; EO = extrinsic orientation, IO = intrinsic orientation.

*Correlation is significant at the 0.05 level (2-tailed)

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

Table 14

Model Summary

	SS	df	MS	F	p	R ²	Adj. R ²
Regression	7539.624	7	1077.089	3.263	.003	0.093	0.064
Residual	73934.314	224	330.064				
Total	81473.938	231					

Table 15

Summary of Regression Weights for Variables Predicting Teacher Efficacy

Variable	B	β	r _s	r _s ²	p
(Constant)	171.513				
Campus Type	-4.760	-.118	-.152	.023	.109
Gender	-.923	-.018	.062	.004	.805
Grade Level	-3.054	-.150	-.403	.162	.033*
Teacher Experience	.245	.028	.570	.325	.764
Teacher Age	1.545	.191	.692	.479	.044*
Extrinsic Orientation	-2.198	-.045	.489	.240	.512
Intrinsic Orientation	3.435	.148	-.134	.018	.038*

*Significant at the 0.05 level (2-tailed)

Regression weights indicated three independent variables were significantly related to teacher efficacy, including grade level taught, teacher age, and intrinsic religious orientation. Effect size calculation revealed 9.3% of the variance in efficacy is explained by the predictor variables ($R^2 = .093$). More specifically, teacher age, teacher experience, and extrinsic orientation contribute the most variance to the model, presenting structure coefficients of .479, .325, and .240, respectfully, but beta weights indicated teacher age and intrinsic orientation received the most credit in the outcome.

Summary

This chapter reported the data collected for the research study. It described the sample participants and reported descriptive statistics, assumptions of multiple regression, instrument reliability, and inferential statistics. Furthermore, it reported findings related to the two research questions. The next chapter discusses the findings related to the relationship between teacher efficacy and teacher religiosity; additionally, the results are used to support recommendations for future research studies and field application.

CHAPTER 5

DISCUSSION AND FINDINGS

The purpose of this study was to examine the relationship between teacher characteristics and teacher efficacy. In particular, the study explored whether religious orientation was a predictor of teacher efficacy. This chapter reviews the research methodology, summarizes and discusses the results of the study, presents limitations and suggestions for future research, and offers recommendations for practitioners.

Review of Methodology

This study surveyed public school teachers in one school district in North Texas and private school teachers from schools in Western Washington to measure the relationship between teacher efficacy and seven teacher characteristics, including teacher age, gender, grade level taught, years of teaching experience, campus type (public versus private religious), intrinsic religious orientation and extrinsic religious orientation. This quantitative study employed two instruments, the Teachers' Sense of Efficacy Scale (TSES) and the Age Universal I-E scale, as well as collected teacher demographic data on a separate form. Data from 232 surveys were analyzed using descriptive and inferential statistics; more specifically, multiple regression results, including interpreting effect sizes, beta weights, and structure coefficients, were used as the basis for interpreting the findings of this study.

Summary of Results

Recent research studies have purported several predictors of teaching efficacy, including nurturing mentor relationships, principals' leadership practices, and teacher demographics,

including teacher experience level, gender, age, and grade level taught (Hrncir, 2007; Ryan, 2007; Fives & Buehl, 2010; Edwards, Green, & Lyons, 1996; Penrose, Perry, & Ball, 2007; Fives & Looney, 2009; Paneque & Barbetta, 2006). Other researchers have explored the inner life of the teacher, hoping to better understand how psychographic variables, such as prayer, meditation, and spiritual beliefs affect teachers' professional lives (Garner, 2007; Kessler, 2000; Houston & Sokolow, 2007; Palmer, 1998, 2003; Suhor, 1998-99; Campbell, 2003). Because there are no studies specifically investigating the relationship between teacher efficacy and teachers' religious orientation, this study addressed the gap in the literature. The research question guiding this study asked, "Which variables are most salient in predicting teacher efficacy?" This section interprets the results of the study, including an examination of the independent predictor variables (campus type, gender, grade level taught, experience level, age, intrinsic religious orientation, and extrinsic religious orientation) and discusses their predictive powers on the dependent variable, teacher efficacy.

Campus Type

There is little research exploring the efficacy of private or independent school teachers (Egger, 2006); furthermore, there are no studies comparing the efficacy beliefs of public and private religious school teachers. Therefore, the study included participants' campus type (public verses private religious) as one of six independent predictor variables in the model. Public school teachers in this study reported themselves as being slightly more efficacious than private school teachers; however, in this study campus type was not a statistically significant predictor of efficacy beliefs. The correlational analysis of teacher efficacy and campus type yielded a Pearson r value of $-.152$ and contributed only 2.3% of the overall effect size. Finally, the beta weight was

a mere -.118, confirming the variable's lack of influence in the model.

Although campus type was not a predictor of efficacy beliefs, there are several points worth noting. First, the private school teachers participating in this study indicated they were less experienced and younger than public school teachers, two variables often confounded and inherent of each other. Because mastery experiences are the strongest predictors of teaching efficacy (Tschannen-Moran & Hoy, 2007), it is not surprising a younger, less experienced group of teachers would report themselves as being less efficacious than a more experienced sample. Furthermore, despite the reports private school teachers are more satisfied with their schools than public school teachers (Alt & Peter, 2002), the average annual base salaries of public and private school teachers are markedly different, \$49,600 and \$36,300, respectfully (Coopersmith & Gruber, 2009), indicating older teachers may not be able to afford to teach at a private schools.

Second, the results showed private religious school teachers perceived themselves more intrinsically oriented than public school teachers, an expected result considering the private school teachers in this sample are employed by schools requiring employees to subscribe to a particular statement of faith and religious beliefs. When compared to the types of extrinsic orientation questions asked on the Age Universal I-E scale, the private schools' statements of faith are more intrinsically than extrinsically oriented (Gorsuch & Venable, 1983).

Gender

Gender was the next teacher demographic explored in the model of this research study. In previous studies, females reported significantly higher mean scores of teaching efficacy than males (Edwards, Green, & Lyons, 1996; Fives & Looney, 2009), but other studies did not find a significant relationship between the two variables (Tschannen-Moran & Hoy, 2007; Penrose,

Perry, & Ball, 2007; Egger, 2006). Females in this study perceived themselves as being only slightly more efficacious than males did, and gender was not a statistically significant predictor of teacher efficacy. The correlational analysis of gender and teacher efficacy described this relationship, yielding a Pearson r value of .062 and contributing a mere .4% of the overall effect size. The beta weight was -.018, further confirming the weakness of gender as a predictor of teacher efficacy in this study.

The data showed female teachers in this sample were more likely to teach elementary school, have more experience and be slightly older compared to males in the study. Although the results were not significant in this research study, they were similar to previous studies, and therefore, not surprising (Edwards, Green, & Lyons, 1996; Fives & Looney, 2009; Fives & Buehl, 2010; Tschannen-Moran & Hoy, 2007; Egger, 2006).

Donahue (1985) summarized the findings of seven studies (Alker & Gawin, 1978; Paloutzian, Jackson, & Crandall, 1978; Baither & Saltzberg, 1978; Strickland & Schaffer, 1971; Strickland & Weddell, 1972; Thompson, 1974; Spilka, Pelligrini, & Dailey, 1968), and these studies showed women consistently scored higher on the intrinsic orientation scale than males; furthermore, the researchers reported no notable difference among the extrinsic orientation of males and females. Interestingly, females in this study reported themselves as having a greater extrinsic religious orientation than the male participants.

Grade Level Taught

Several previous studies report elementary school teachers as being more efficacious than secondary school teachers (Edwards, Green, & Lyons, 1996; Fives & Buehl, 2010; Fives & Looney, 2009). Tschannen-Moran and Hoy (2007) also reported a significant relationship

between grade level taught and teacher efficacy among experienced teachers.

Grade level taught was one of three significant predictors of teacher efficacy in this study, presenting elementary teachers as more efficacious than teachers of grades 6 through 12 ($r_s = -.403$). It contributed to 16.2% of the overall effect size; however, grade level taught presented a beta weight of $-.150$, one of the smaller in the study, indicating, although it is a strong contributor to the model, it may not be as important as other variables in the equation. The elementary teachers in this sample were more likely to be female, more experienced, older, and possess a higher extrinsic religious orientation when compared to middle or high school teachers.

Teacher Experience

Teacher experience is frequently tested to measure its predictive power on teacher efficacy (Paneque & Barbetta, 2006; Tschannen-Moran & Hoy, 2007; Fives & Buehl, 2010; Penrose, Perry, & Ball, 2007; Soodak & Podell, 1997; Edwards, Green, and Lyons, 1996; Egger, 2006). Although Tschannen-Moran and Hoy (2007) acknowledge the reasonable assumption relating teacher experience to teacher efficacy, they explain efficacy beliefs “tend to be fairly stable once set” and may not necessarily increase as experience increases (p. 952). Two studies reported this phenomenon, finding somewhat lower means for novice teachers when compared to experienced teachers; however, their results revealed no significant relationship between the two (Paneque & Barbetta, 2006; Tschannen-Moran & Hoy, 2007).

In contrast, Fives and Buehl (2010), Penrose, Perry, and Ball (2007), and Soodak and Podell (1997) found significant differences among beginning and experienced teachers. Egger (2006) reported a significant relationship between experience and efficacy, finding it contributed 17% of the variance in the model. Tschannen-Moran and Hoy (2007) credited the higher efficacy

beliefs of experienced, older teachers to the trend of teacher attrition. Because many teachers with low efficacy leave the profession in the early stages of their careers, feel more job-related stress and may be less committed, the higher efficacy scores of experienced, older teachers may be “the result of higher attrition among lower self-efficacy teachers” (Tschannen-Moran & Hoy, 2007, p. 952).

Other researchers reported a negative relationship between increased teacher experience and teacher efficacy, suggesting teachers in the pre-service years of the profession perceive themselves as being more efficacious than their more experienced colleagues (Edwards, Green, & Lyons, 1996; Soodak & Podell, 1997). Related studies showed efficacy levels often drop during the first year of teaching experience, slowly increasing again over time (Soodak & Podell, 1997; Tschannen-Moran & Hoy, 2007).

Teacher experience was not a significant predictor of teacher efficacy in this study; however, experienced teachers reported higher levels of teacher efficacy and contributed to 32.5% of the overall effect size in the model. In spite of this large effect size, experience level presented a beta weight of .028, a near-zero coefficient, indicating although it is a strong contributor, it may not be as important as other variables in the equation. The experienced teachers in this study’s sample were more likely to teach in a public school, be female, teach at the elementary level, be older, and possess an extrinsic religious orientation when compared to novice teachers.

Teacher Age

While Penrose, Perry, and Ball (2007) and Fives and Looney (2009) reported no significant relationship among teacher age and teacher efficacy, Edwards, Green, and Lyons

(1996) found age significantly contributed to their model. Teacher age was a significant predictor of teacher efficacy in this study, presenting older teachers as more efficacious than younger teachers ($r_s = .692$). Age contributed 47.9% to the overall effect size of the study; furthermore, age presented a beta weight of .191, the largest in the study, indicating it was the strongest contributor in the model. The older teachers participating in this study were more likely to teach in a public school, be female, teach at the elementary level, possess teaching experience, and hold an extrinsic religious orientation than younger teachers.

Interestingly, both teacher experience and teacher age contributed the highest effect sizes in the study, 32.5% and 47.9%, respectively, and were therefore better predictors of teacher efficacy than any other variable tested in this study. Furthermore, age and experience level were highly correlated with each other ($r = .730, p < .01$). It is logical that teachers accumulate years of experience and age concurrently, and because of the high correlation between the two in this study, these effects may likely be shared values.

Intrinsic Religiosity

Intrinsic religiosity was also a significant predictor of teacher efficacy in this study, presenting teachers with an intrinsic religious orientation ($r_s = -.134$) as more efficacious than those with an extrinsic orientation. Although it contributed a mere 1.8% of the overall effect size, it presented a beta weight of .148, second only to teacher age. This indicates although it is not a strong contributor to the model, it gets notable credit in the outcome and, thus, it is an important variable in the equation. The teachers with an intrinsic orientation in this sample were more likely to work in the public school, be male, teach middle or high school, and have less experience than those with an extrinsic orientation.

Intrinsic religiosity's contribution to this model is an anomaly. While a significant relationship and correlation between intrinsic religious orientation and teaching efficacy was reported, it was coupled with intrinsic religious orientation's weak predictive power (low effect) on teacher efficacy. This indicates intrinsic religious orientation may be a suppressor variable, an independent variable having little effect on the dependent variable while contributing to the predictive value of the model (Lancaster, 1999), and is most likely strongly correlated with one of the other independent variables. Or perhaps intrinsic religious orientation is related to something outside of the model, an elusive construct this study did not measure.

Extrinsic Religiosity

Extrinsic religiosity was not a significant predictor of teacher efficacy in this study; furthermore, teachers with this type of religious orientation report themselves as less efficacious than those with an intrinsic orientation. Interestingly, extrinsic religious orientation contributed 24.0% to the overall effect size of the study, but it presented a beta weight of -.045, indicating it is a weak contributor to the equation. The model revealed teachers with an extrinsic orientation were more likely to work in a private school, be a female, teach in the elementary grades, be older, and have more teaching experience.

Discussion

The purpose of this study was to determine which predictor variables were most salient in predicting teacher efficacy; more specifically, the study determined whether or not religious orientation was a better predictor of teaching efficacy than teacher characteristics. The study showed teacher age, grade level taught, and teacher extrinsic religious orientation accounted for

the most effect in the model. One variable, intrinsic orientation, presented an important finding, as it strongly correlated with only one variable, campus type. But acting as a suppressor variable, it indirectly contributed to the outcome of the model, indicating it may predict an elusive construct not measured in this study or overlap with the other significant predictors, age and experience. The following section reviews the predictive power of intrinsic orientation; furthermore, it reviews theoretical constructs related to teaching efficacy and suggests one may be a liaison between the two variables.

To better understand the notion of intrinsic religiosity as a suppressor variable, it is important to revisit the predictive power of intrinsic religiosity on the areas of psychology and social sciences. Bergin, Masters, and Richards (1987) called intrinsic orientation an “asset” and reported it positively correlated with self-control and personality functioning and negatively correlated with anxiety. Park, Cohen, and Herb (1990) reported intrinsic orientation acted as a moderator of life stressors by “providing a framework of meaning, helping individuals make sense of negative experiences” (p. 572). Intrinsic orientation also affects internal locus of control (Kahoe, 1974; Strickland & Shaffer, 1971), purpose in life beliefs (Crandall & Rasmussen, 1975), intrinsic motivation (Kahoe, 1974), trait anxiety (Baker & Gorsuch, 1982; Bergin, Masters & Richards, 1987), personality functioning, and self-control (Bergin, Masters, & Richards, 1987).

Bergin, Masters, and Richards (1987) cautioned implying causal connections between intrinsic religiosity and other constructs and suggested “it could be that intrinsic religiousness facilitates adjustment, that good adjustment facilitates intrinsicness, or that the relation is circular” (p. 202). The nature of religion precludes offering definitive directions as to the role intrinsic religiosity plays in this research model; however, three possible scenarios may explain

the outcome of this study. These possibilities include the shared variance of three variables (age, experience, and intrinsic religious orientation), the possibility of a missing variable being suppressed by intrinsic religiosity (optimism, academic optimism, or emotion), or the suggestion intrinsic religious orientation is a personality variable in itself.

Shared Variance

The existence of overlapping variables in this study is quite possible. Most obvious, the older and more experienced participants in the study accounted for the most variance in the model and would logically overlap with each other; furthermore, age and experience level were significantly correlated with intrinsic religiosity. In their study of intrinsic religiousness and life stress, Park, Cohen, and Herb (1990) explained developing a “framework of meaning...requires time for the individual to integrate negative experiences into his or her religious belief system” (p. 572). Allport and Ross (1967) explained religious orientation beliefs foster a consistent cognitive style, and for the purpose of this study, the cognitive beliefs predicting teacher efficacy. Considering it takes time for one to develop a deep religious belief system, teacher age, experience level, and intrinsic religiosity may overlap each other.

Missing Variables

Given the regression results of this study, the presence of a missing variable related to both intrinsic religiosity and teacher efficacy is also possible. Intrinsic religiosity may be acting as a suppressor variable, seeming unimportant but actually providing “substantial indirect contributions to improving regression effects” (Lancaster, 1999, p. 4). It is beyond the scope of this study to determine a conclusive set of possible variables, but a review of the research

reporting predictors of teacher efficacy and the predictive power of intrinsic religiosity provides some viable options for missing variables, including teacher optimism as a component of academic optimism and teacher emotion.

Academic Optimism

Although teachers' talent and motivation is correlated with school achievement, Seligman (2006) emphasizes that a third component, optimism, matters as much as talent or motivation. Optimism is considered a personal disposition, defined as "a tendency to believe that one will generally experience good outcomes in life and avoid bad outcomes" (Seligman & Csikszentmihalyi, 2000). Peterson (2000) stated, "optimism is predicated on evaluation—on given affects and emotions" (p. 44) and along with hope, spirituality, creativity, wisdom, perseverance and faith, it is part of future mindedness (Seligman, 1998, 2000, 2002). Researchers have successfully measured dispositional optimism using The Life Orientation Test (Scheier & Carver, 1985; Peterson, 2000; Ai et al., 2002; Hoy, Hoy, & Kurz, 2008) and found optimism is related to mood, morale, problem solving, academic and occupational success, and general good health (Peterson, 2000).

Psychologists believe optimism is a psychological trait rather than a variable predicted by religious beliefs, while religious researchers accredit faith as a source of optimism (Ai et al., 2002). Although optimism is positively related to religious roots and to positive future mindedness (Dull & Slokan, 1995; Scheier & Carver, 1987), some contend religion was partially created to meet the human need for optimism, a need for belief in afterlife (Freud, 1928; Tiger, 1979). In either case, the two are interrelated and justify suggesting religious orientation is related to dispositional optimism.

The recently theorized construct of academic optimism further extends the human agency theory and explains teachers' judgments in three dimensions: cognitive (teacher efficacy), affective (teacher trust in students and parents) and behavioral (academic emphasis) (Woolfolk Hoy et al., 2008). Academic optimism in teachers is predicted by teacher citizenship, humanistic classroom management, dispositional optimism, and student-centered teaching (Woolfolk Hoy et al.). Woolfolk Hoy et al. reported these predictors explained two-thirds of the variance in their study and challenged researchers to explore the remaining one-third variance, suggesting such variables as teacher openness, conscientiousness, extroversion and tolerance. Interestingly, Allport and Ross (1967) found tolerance to be a "consistent cognitive style" and highly correlated with intrinsic religious orientation (p. 442).

The aforementioned research studies reported the relationships among religious orientation, dispositional optimism and tolerance, and further research could explain the correlation between the factors and intrinsic religious orientation. Thus teacher efficacy, a component of academic optimism, may be related to intrinsic religious orientation through the variables of dispositional optimism and, perhaps, tolerance.

Teacher Emotion

Emotional intelligence is another possible variable missing from this model. Sutton and Wheatley (2003), Rastegar and Memarpour (2009) and Penrose, Perry and Ball (2007) reported teacher emotions affect teaching efficacy, and the relationship is independent of gender and age and more powerful than experience level alone (Penrose, Perry & Ball, 2007; Rastegar & Memarpour, 2009). Sutton and Wheatley (2003) claimed different emotions "influence how teachers think about and interact with students" (p. 330); furthermore, cultural differences affect

different teachers' responses to similar pedagogical situations (Sutton & Wheatley, 2003; Rastegar & Memarpour, 2009). For example, one teacher may view a disruptive, defiant student as apathetic and become frustrated or anxious, while another may consider the behavior related to an unmet learning need or cultural difference and in turn, respond empathetically.

There are research studies relating emotions to teaching and student learning (Penrose, Perry & Ball, 2007; Rastegar & Memarpour, 2009; Sutton & Wheatley, 2003), and the research relating emotions such as self-control, internal locus of control, insecurity, motivation, and anxiety to intrinsic religiosity is also thorough (Baker & Gorsuch, 1982; Bergin, Masters, & Richards, 1987; Park, Cohen, & Herb, 1990; Kahoe, 1974; Ryan & Deci, 2000; Strickland & Shaffer, 1971). Because of the widespread studies reporting the relationships between emotion and teaching and emotion and intrinsic religious orientation, teacher emotion could be the missing variable explaining intrinsic religiosity's weight in the model.

Intrinsic Religiosity as a Personality Variable

The final suggestion includes the possibility intrinsic religious orientation moderates general personality. This research study measured demographic and psychographic variables including teacher gender, age, experience level, grade level taught, campus type, and efficacy and religious orientation beliefs, but it did not measure personality per se. Bergin, Masters, and Richards (1987) explained the possibility "in devoutly religious families, child-rearing practices are inextricably laced with spiritual variables so that personality development and religiousness are manifestations of a single process" (p. 202). Other researchers echo this suggestion, explaining intrinsic and extrinsic orientations may be less about religion and more similar to a personality variable (Hunt and King, 1971). Hunt and King (1971) purported "in some

theological perspectives all behavior is religious, since by implication it expresses one's faith perspective, his orientation to the ultimate meanings of life" (p. 354). Similarly, Allport and Ross (1967) maintained "the inner experience of religion" is a "causal factor" in one's outlook on life (p. 435). Therefore, Allport (1950) and Allport and Ross (1967) suggest researchers use psychographic or group traits in addition to demographic factors to help "show where attitudes come from" and to explore how they affect behaviors (Allport, 1950, p. 173).

Given intrinsic religiosity's predictive power over behaviors such as intrinsic motivation and responsibility (Kahoe, 1974), internal locus of control (Kahoe, 1974; Strickland & Shaffer, 1971), purpose in life (Crandall & Rasmussen, 1975), trait anxiety (Baker & Gorsuch, 1982; Bergin, Masters & Richards, 1987), better personality functioning and self-control (Bergin, Masters, & Richards, 1987), ego strength, integrated social behavior and insecurity (Baker & Gorsuch, 1982), and depressive symptoms (Smith, McCullough, & Poll, 2003), it is reasonable to suggest there is an overlapping or highly correlated relationship between teachers' cognitive (efficacy) and affective (religious orientation) beliefs.

Researchers have shown teachers' thought processes, decision-making, personal theorizing, and pedagogical approaches are affected by the values and beliefs they bring to the classroom (Richards, 2005; Palmer, 1993, 1998; Campbell, 2003; Hartwick, 2004). Because of the inter-relatedness among the variable of intrinsic religiosity and every-day living, including one's vocation, intrinsic religiosity could play a role in shaping teacher thinking, decision making, attitudes and beliefs, motivation, and therefore, teaching efficacy.

Limitations and Suggestions for Future Research

The link between teacher efficacy and religious orientation is more complicated than first hypothesized. Further research is needed to determine the presence of missing variables by experimenting with mediating factors, moderating factors, pathways between factors, and interactions among factors. Although causal inferences among the variables must be treated cautiously, future research studies replicating this model might consider employing structural or hierarchical regression modeling in order to control for each variable and determine how much variance each explains.

Although intrinsic religiosity contributed to the overall effect in this study, it is uncertain whether or not these findings can generalize to other religions. Future studies should attempt to measure non-Christian religious orientations in order to replicate these findings. Furthermore, because this study incorporated a self-rating structure, the results should be treated as self-perceptions rather than objective data. Future research might consider qualitative approaches, including teacher interviews or observations, to enhance TSES and Age Universal I-E data.

Suggestions for Practitioners

Although this study measured predictors of teaching efficacy, its intention was to unravel the role religious beliefs play in teacher cognition. There are dangers associated with judging others' religious beliefs (Bergin, Masters, & Richards, 1987), but this study was less about categorizing teachers and more about exploring the affective domain's (religious orientation's) influence over the cognitive domain (efficacy beliefs). The study presented three significant predictors of teacher efficacy: grade level taught, teacher age, and intrinsic religious orientation. Calculated effect sizes and beta weights, however, presented a different picture, offering teacher

experience, teacher age, and intrinsic religious orientation as the largest contributors to the model. Although the overall effect size ($R^2 = .093$) is not considered *large* per se, it presents a notable relationship between the model's factors. As a result of these data, the following sections focus on these three variables when making recommendations for field application; however, given the purpose of this study, the emphasis was placed on suggestions related to intrinsic religious orientation.

Recommendations Related to Teacher Age and Experience Level

Mastery teaching experiences require time in the classroom and are the most powerful source of teaching efficacy beliefs (Bandura, 1997; Pajares, 2002; Tschannen-Moran et al., 1998; Tschannen-Moran & Hoy, 2007); furthermore, these experiences provide information related to one's capabilities and chances for success (Bandura 1997), and may predict teacher resilience (Tschannen-Moran & Hoy, 2007). Because of the experiential component of building efficacy, it is logical to assume teacher age and teacher experience are confounded variables.

Notwithstanding the mixed result from previous research studies measuring the relationship between age, experience, and efficacy, this study showed a significant and meaningful relationship between the three variables.

Certainly older, more experienced teachers are not necessarily the best teachers in every school, but few would argue the value in identifying experienced, efficacious teachers and utilizing them in campus leadership roles. This study adds to the literature in this area of leadership by reminding school administrators to purposefully assign efficacious teachers with experiential knowledge to be mentors, teacher leaders, and to be key partners in developing and sustaining professional learning communities. Part of assigning teachers to such leadership roles

involves carefully crafting a structured process and shared vision for administrators and teachers. Flippantly assigning master teachers to be mentors, trainers or facilitators may cause divisiveness among a faculty, the opposite of the intended outcome. It should be noted this is not a comprehensive list of suggestions related to sustaining and utilizing experienced, efficacious teachers; however, the purpose of this study was to present the relationship between religiosity and efficacy in light of demographics such as age and experience.

Recommendations Related to Intrinsic Religiosity

The findings associated with the predictive power of intrinsic religiosity on teacher efficacy are more delicately applied to the field of education. Although investigations exploring the roles religion and spirituality play in the lives of teachers have produced significant, meaningful results in the field (Campbell, 2003; Coffron, 2008; Hartwick, 2004; Palmer, 1993, 1997, 1998, 2003), Hartwick (2004) cautioned, “Spirituality and religion should not, and in a deep sense cannot, be forced on teachers” (p. 178). In order to honor the fragile nature of religion, the following suggestions should be thoughtfully and cautiously applied to public and private school settings; furthermore, legal implications for both campus types should be considered. Therefore, the following suggestions are intended for private religious school communities and individual public school teachers and administrators, not public school communities at large.

Because this research demonstrated a significant and meaningful relationship between teacher efficacy and the intrinsic religious orientation of public and private school teachers, the suggestions for field application focus on ways to foster the intrinsic orientation of teachers. Similarly, counselors Bergin, Masters, and Richards (1987) sought ways to increase their clients’

intrinsic orientation beliefs in order to promote better life planning. They suggested clients participate in social support opportunities provided by religious institutions and engage in religious experiences, such as spiritual retreats, meditation or prayer to strengthen intrinsic orientation (Bergin, Masters & Richards, 1987). Hartwick (2004) specifically recommended teachers attend Parker Palmer's *Courage to Teach* Retreats in order to "help teachers draw on their inner lives to rekindle the passion for teaching" as well as participate in spirituality and education courses, journaling activities, and action research exploring the impact of spiritual practices on their life and work (p. 176). Byrk, Lee, and Holland (1993) found Catholic school faculties who spend time outside of school together reported more solidarity and engage in school decision making that is "less conflictual and more often characterized by mutual trust and respect" (p. 299).

The results of this study and the need for teachers to better understand how their beliefs and values affect pedagogy (Campbell, 2003; Coffron, 2008; Hartwick, 2004; Palmer, 1993, 1997, 1998, 2003), suggest private school administrators could explore professional development strategies intended to support the awareness and growth of intrinsic orientation beliefs among their faculties. The administrators could begin by facilitating professional development groups to explore the topic of intrinsic religiosity. Teachers and administrators should understand the difference between extrinsic and intrinsic orientations and the relationship between teacher cognition and psychographic attributes.

More specifically, private religious school professional development groups could analyze the discourse used in the survey instrument, carefully deconstructing and discussing the items and how they relate to the participants' beliefs and their roles as educators. For example, intrinsic orientation survey factors items include statements such as, "It is important to me to

spend time in private thought and prayer,” and, “I would rather join a Bible study group than a church social group.” Group participants can discuss how they incorporate meditation, reflection, prayer, and study groups into their lives and how it relates to their roles as educators. They could extend this discussion to incorporate action research and reflection. These discussions bring awareness and strength to teachers’ intrinsic religious beliefs and practices, in turn increasing the benefits (decreased stress, improved motivation, job satisfaction, and overall responsibility) of sustaining and strengthening this orientation (Kahoe, 1974; Bergins, Masters, & Richards, 1987; Baker & Gorsuch, 1982; Krause et al., 2000; Hartwick, 2004).

Once participants understand the basic tenets of the intrinsic orientation, administrators or teacher leaders can design activities intended to nurture this orientation. Allowing time for teachers to participate in regularly scheduled devotionals, religious book studies or reflection are ways groups and individuals can strengthen their intrinsic beliefs. Given the importance and value of this orientation, teachers and administrators should consider including a component of religious development in the goals section of their performance evaluation. As mentioned earlier, religion should never be forced on teachers (Hartwick, 2004), so supervisors should not facilitate this goal setting; however, it is important for religious school faculty members to be able to articulate their faith and beliefs and recognize their intrinsic and extrinsic tendencies.

In the secular field, the constitution permits public school administrators and individual teachers to participate in such activities as long as they are not acting in an official capacity as employees. Public school educators could participate in the aforementioned activities in a self-study fashion or unofficially gather with other colleagues outside of school to form discussion groups to explore these topics.

Summary and Final Remarks

This chapter reviewed the purpose of the study, the research methodology, discussed the results of the study, and provided limitations, recommendations, and suggestions for educational leaders and public and private religious school teachers. This study joins the area of research exploring the predictive power of religious orientation and its relationship with constructs in the fields of psychology and social sciences. Although the nature of religion precludes researchers from making definitive statements regarding the findings of studies similar to this one as they relate to religious orientation, it is important to acknowledge the findings as relevant and meaningful. Hopefully this study will contribute the growing body of research in the field and encourage teachers and administrators to strengthen their intrinsic religious beliefs. This, in turn, will enrich their personal and professional experiences, and increase their job satisfaction, sustain their call to the vocation, and, thus, enrich teaching efficacy beliefs.

APPENDIX
INSTITUTIONAL REVIEW BOARD APPROVAL



OFFICE OF THE VICE PRESIDENT FOR RESEARCH AND ECONOMIC DEVELOPMENT
Research Services

April 13, 2010

Dr. Jane Huffman
Department of Teacher Education and Administration
University of North Texas

RE: Human Subjects Application No. 10-180

Dear Dr. Huffman:


In accordance with 45 CFR Part 46 Section 46.101, your study titled "An Examination of the Relationship Between Teacher Efficacy and Teacher Religiosity" has been determined to qualify for an exemption from further review by the UNT Institutional Review Board (IRB).

Enclosed is the consent document with stamped IRB approval. Please copy and **use this form only** for your study subjects.

No changes may be made to your study's procedures or forms without prior written approval from the UNT IRB. Please contact Jordan Smith, Research Compliance Analyst, ext. 3940, if you wish to make any such changes. Any changes to your procedures or forms after 3 years will require completion of a new IRB application.

We wish you success with your study.

Sincerely,



Patricia L. Kaminski, Ph.D.
Associate Professor
Chair, Institutional Review Board

PK:js

REFERENCES

- Africa v. Pennsylvania*, 662 F.2d 1025, 1031 (3d Cir. 1981).
- Ai, A. L., Peterson, C., Bolling, S. F., & Koenig, H. (2002). Private prayer and optimism in middle-aged and older patients awaiting cardiac surgery. *Gerontologist*, 42(1), 70-81.
- Alker, H. A., & Gawin, F. (1978). On the intrapsychic specificity of happiness. *Journal of Personality*, 46, 311-322.
- Allport, G. (1950). The American soldier. *Journal of Abnormal and Social Psychology*, 45(1), 168-173.
- Allport, G. W. (1963). Behavioral science, religion, and mental health. *Journal of Religion and Health*, 2, 187-197.
- Allport, G. W., & J. M. Ross (1967). Personal religious orientation and prejudice. *Journal of Personality and Social Psychology*, 5, 432-443.
- Alt, M. N., & Peter, K. (2002) *Private schools: A brief portrait*, Retrieved December 22, 2009, from <http://nces.ed.gov/pubs2002/2002013.pdf>
- Anusic, I., Schimmack, U., Pinkus, R., & Lockwood, P. (2009). The nature and structure of correlations among Big Five ratings: The halo-alpha-beta model. *Journal of Personality and Social Psychology*, 97(6), 1142-1156.
- Argue, A., Johnson, D. R., & White, L. K. (1999). Age and religiosity: Evidence from a three-wave panel analysis. *Journal for the Scientific Study of Religion*, 38(3), 423-435.
- Armor, D., Conroy-Oseguera, P., Cox, M., King, N., McDonnell, L., & Pascal, A. (1976). *Analysis of the school preferred reading program in selected Los Angeles minority schools*. (Report No. R-2007-LAUDS). Santa Monica, CA: RAND. (ERIC Document Reproduction Service No. 130 243).
- Atay, D. (2007). Beginning teacher efficacy and the practicum in an EFL context. *Teacher Development*, 11(2), 203-219.
- Autry, J. A. (2001). *The servant leader: How to build a creative team, develop great morale, and improve bottom-line performance*. New York, NY: Three Rivers Press.
- Baither, R. C., & Saltzberg, L. (1978). Relationship between religious attitude and rational thinking. *Psychological Reports*, 43, 853-853.
- Baker, M., & Gorsuch, R. (1982). Trait anxiety and intrinsic-extrinsic religiousness. *Journal for the Scientific Study of Religion*, 21, 119-122.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215.

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (Ed.) (1995). *Self-efficacy in changing societies*. New York, NY: Cambridge University Press.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman and Company.
- Bandura, A. (2002). Social cognitive theory in cultural context. *Applied Psychology: An International Review*, 51(2), 269.
- Barton, D. (2000). *Original intent: The courts, the constitution, and religion*. Aledo, TX: Wallbuilder Press.
- Beard, K. S., Hoy, W. K., & Woolfolk Hoy, A. (2010). Academic optimism of individual teachers: Confirming a new construct. *Teaching and Teacher Education*, 26, 1136-1144.
- Bembenuity, H. (2007). The last word: An interview with Frank Pajares--God, the Devil, William James, the Little Prince, and self-efficacy. *Journal of Advanced Academics*, 18(4), 660-677.
- Bergin, A. E., Masters, K. S., & Richards, P. S. (1987). Religiousness and mental health reconsidered: A study of an intrinsically religious sample. *Journal of Counseling Psychology*, 34(2), 197-204.
- Bruning, M. D. (2000, March). *Positive, peaceful interactions between adults and young children*. *Growing together: Building a peaceful community*. Paper presented at the 2000 Early Childhood Conference, South Bend, IN.
- Biro, R. (2001). *The relationship of teacher religiosity and First Amendment understanding to the treatment of holidays among elementary teachers in the classroom*. Unpublished doctoral dissertation, The Union Institute, Ohio.
- Bryant, M. T. (2004). *The portable dissertation advisor*. Thousand Oaks, CA: Corwin Press.
- Byrk, A. S., Lee, V. E., & Holland, P. B. (1993). *Catholic schools and the common good*. Cambridge, MA: Harvard University Press.
- Campbell, L.H. (2003, April). *The spiritual lives of artists/teachers*. Paper presented at the meeting of the American Educational Research Association, Chicago, IL.
- Carroll, J. (2004). *Happy Holidays vs. Merry Christmas*. Retrieved June 27, 2007 from <http://www.galluppoll.com/content/?ci=14410&pg=2>
- Coffron, S. R. (2008). *Seeking Nirvana: The nature of teachers' spiritual growth through professional development*. Unpublished doctoral dissertation, Capella University, Minneapolis, MN.

- Coopersmith, J., & Gruber, K. (2009). *Characteristics of public, private, and bureau of Indian education elementary and secondary teachers in the United States: Results from the 2007-2008 schools and staffing survey*, Retrieved July 29, 2010, from <http://nces.ed.gov/pubs2009/2009324.pdf>
- Crandall, J. E., & Rasmussen, R. D. (1975). Purpose in life as related to specific values. *Journal of Clinical Psychology*, *31*, 483-485.
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage Publications.
- Danielson, C. (2002). *Enhancing student achievement: A framework for teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Donahue, M. J. (1985). Intrinsic and extrinsic religiousness: Review and meta-analysis. *Journal of Personality and Social Psychology* *48*(2), 400-419.
- Dull, V. T., & Slokan, L. A. (1995). A cognitive model of religion's influence on health. *Journal of Social Issues*, *51*, 49-64.
- Edwards, J. L., Green, K. E., & Lyons, C. A. (1996, April). *Teacher efficacy and school and teacher characteristics*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.
- Edwards v. Aguillard*, 482 U.S. 578 (1987).
- Egger, K. J. (2006). *An exploration of the relationships among teacher efficacy, collective teacher efficacy, and teacher demographic characteristics in conservative Christians schools*. Unpublished doctoral dissertation, University of North Texas, Denton, TX.
- Engel v. Vitale*, 370 U.S. 421 (1962).
- Epperson v. Arkansas*, 393 U.S. 97 (1968).
- Everson v. Board of Education*, 330 U.S. 1 (1947).
- Fawns, R. L. (2006). *Teachers, faith, and coping: An investigation*. Unpublished doctoral dissertation, University of the Pacific, Stockton, CA.
- Fives, H., & Buehl, M. M. (2010). Examining the factor structure of the Teachers' Sense of Efficacy Scale. *Journal of Experimental Education*, *78*, 118-134.
- Fives, H., & Looney, L. (2009). College instructors' sense of teaching and collective efficacy. *International Journal of Teaching and Learning in Higher Education*, *20*(2), 182-191.
- Freud, S. (1928). *The future of an illusion*. London: Hogarth.
- Frost, R. (1964). *Robert Frost's poems*. New York, NY: Washington Square Press, Inc.

- Fullan, M. (2007). *The new meaning of educational change* (4th ed.). New York, NY: Teachers College Press.
- Gall, M. D., Gall, J. P., & Borg, W. R. (2007). *Educational research: An introduction*. Boston, MA: Pearson.
- Garner, G. K. (2007). *Getting to get it: Helping struggling students learn how to learn*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Gibson S., & Dembo, M. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, 76(4), 569-582.
- Glatthorn, A. A., & Joyner, R. L. (2005). *Writing the winning thesis or dissertation: A step-by-step guide*. Thousand Oaks, CA: Corwin Press.
- Glock, C. Y., & Stark, R. (1965). *Religion and society in tension*. Chicago, IL: Rand McNally & Company.
- Gordon, K. C., Frousakis, N. N., Dixon, L. J., Willett, J. M., Christman, J. A., Furr, R., E., & Hellmuth, J. C. (2008). Intrinsic/extrinsic religious orientation, forgiveness, and the role of social pressure. *Journal of Psychology and Christianity*, 27(4), 311-319.
- Gorsuch, R. L., & Venable, G. D. (1983). Development of an "age universal" I-E scale. *Journal for the Scientific Study of Religion*, 22(2), 181-187.
- Gorsuch, R. L. (1984). Measurement: The boon and bane of investigating religion. *American Psychologist*, 39(3), 228-236.
- Gorsuch, R. L. (1988). Psychology of religion. *Annual Review of Psychology*. 39(1), 201-221.
- Greenleaf, R. K. (1977). *Servant leadership: A journey into the nature of legitimate power and greatness*. Mahwah, NJ: Paulist Press.
- Hartwick, J. M. (2004). *An investigation into the spiritual, religious, and prayer lives of Wisconsin public school teachers: The inner life of the teacher*. Unpublished doctoral dissertation, University of Wisconsin-Madison, Madison, WI.
- Haycox, S. A., (2005). *A qualitative study of the role internal compass plays in the longevity and self-efficacy of elementary school principals in Sacramento County*. Unpublished doctoral dissertation, University of Southern California, Los Angeles, CA.
- Haynes, C. C. (1998-99). Averting culture wars over religion. *Educational Leadership*, 56(4), 24-27.
- Henson, R. K. (2001a, January). *Teacher self-efficacy: Substantive implications and measurement dilemmas*. Keynote address presented at Texas A&M University, College Station, TX.

- Henson, R. K. (2001b). The effects on participation in teacher research on teacher efficacy. *Teaching and Teacher Education, 17*(7), 819-836.
- Holdcroft, B. B. (2006). What is religiosity? *Catholic Education: A Journal of Inquiry and Practice, 10*(1), 89-103.
- Houston, P. D., & Sokolow, S. L. (2007). The spiritual dimension of leadership – Part VII. *Instructional Leader, 20*, 1-2, 12.
- Hrncir, S. M. (2007). *The pre-service teacher/cooperating teacher relationship and its impact on pre-service teacher efficacy perceptions*. Unpublished doctoral dissertation, University of New Mexico, Albuquerque, NM, 2007.
- Hui, V. K., & Fung, H. H. (2009). Mortality anxiety as a function of intrinsic religiosity and perceived purpose in life. *Death Studies, 33*, 30-50.
- Hunt, R. H., & King, M. (1971). The intrinsic-extrinsic concept: A review and evaluation. *Journal for the Scientific Study of Religion, 10*(4), 339-356.
- Intrator, S. (2002). *Stories of the courage to teach*. San Francisco, CA: Jossey-Bass Publishers.
- Johnson, B., & Christensen, L. (2004). *Educational research: Quantitative, qualitative, and mixed approaches* (2nd ed.). Boston, MA: Allyn and Bacon.
- Jones v. Clear Creek Independent Sch. District*, 977 F.2d 963 (5th Cir. 1992).
- Kahoe, R. D. (1974). Personality and achievement correlates of intrinsic and extrinsic religious orientation. *Journal of Personality and Social Psychology, 29*, 812-919.
- Kessler, R. (2000). *The soul of education: Helping students find connection, compassion, and character at school*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Khan, Z., Watson, P., & Cothran, D. (2008). Self-control in Pakistani Muslims: Relationships with religious orientation, depression and anxiety. *Journal of Beliefs & Values: Studies in Religion & Education, 29*(2), 213-216.
- Kirkpatrick, L. A., & Hood, R. W. (1990). Intrinsic-extrinsic religious orientation: The boon or bane of contemporary psychology of religion? *Journal for the Scientific Study of Religion, 29*(4), 442-462.
- Koenig, H. (1999). *The healing power of faith: How belief and practice can help you triumph over disease*. New York: NY: Touchstone.
- Koenig, H. G. (2008). *Medicine, religion, and health: Where science and spirituality meet*. West Conshohocken, PA: Templeton Foundation Press.

- Krause, N. (2003). Praying for others, financial strain, and physical health status in late life. *Journal for the Scientific Study of Religion*, 42(3), 377-391.
- Krause, N. (2004). Assessing the relationships among prayer expectancies, race, and self-esteem in late life. *Journal for the Scientific Study of Religion*, 43(3), 395-408.
- Krause, N., Chatters, L. M., Meltzer, T., & Morgan, D. L. (2000). Using focus groups to explore the nature of prayer in late life. *Journal of Aging Studies*, 14, 191-212.
- Labone, E. (2004). Teacher efficacy: Maturing the construct through research in alternative paradigms. *Teaching & Teacher Education*, 20(4), 341-359.
- Lambert, L. (1998). *Building leadership capacity in schools*. Alexandria, VA: Association of Supervision and Curriculum Development.
- Lee v. Weisman*, 505 U.S. 577 (1992).
- Lemon v. Kurtzman*, 403 U.S. 602 (1971).
- Levin, J. (2001). *God, faith, and health: Exploring the spirituality-healing connection*. New York: New York: John Wiley and Sons.
- Light, D., Keller, S., & Calhoun, C. (1989). *Sociology*. New York, NY: Alfred A. Knopf.
- Marks, A. C., & Wright, R. J. (2002, February). *Defining intrinsic and extrinsic motivators of continuing professional education*. Paper presented at the annual meeting of the Eastern Educational Research Association, Sarasota, FL.
- Marzano, R. (2007). *The art and science of teaching: A comprehensive framework for effective instruction*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Mascall, M. B. (2003). *Leaders helping teachers helping students: The role of transformational leaders in building teacher efficacy*. Unpublished doctoral dissertation, University of Toronto, Toronto, ON.
- McColum v. Board of Education*, 333 U.S. 203 (1948).
- McLean v. Arkansas Board of Education*, 529 F. Supp. 1255(E.D. Ark. 1982).
- McFadden, S., & Kozberg, R. (2008). Religious and spiritual supports for late-life meaning. *Generations*, 32(2), 6-11.
- Myers, D. G. (2000). The funds, friends, and faith of happy people. *American Psychologist*, 55, 56-67.
- Moore, B. (2004). *Discovering God's purpose for your life*. Houston, TX: Living Proof Ministries.
- Oxford American college dictionary*. (2002). New York: NY: Penguin Putnam Inc.

- Paige, R. (2003). *Guidance on constitutionally protected prayer in public elementary and secondary schools*. Retrieved March 9, 2007, from <http://www2.ed.gov/policy/gen/guid/religionandschools/index.html>
- Pajares, F. (1996). Self-efficacy beliefs in academic settings. *Review of Educational Research*, 66(4), 543-578. Retrieved September 13, 2009, from Research Library. (Document ID: 11014818).
- Pajares, F. (1997). Current directions in self-efficacy research. *Advances in Motivation and Achievement*, 10, 1-49.
- Pajares, F. (2002). *Overview of social cognitive theory and of self-efficacy*. Retrieved October 26, 2009, from <http://www.des.emory.edu/mfp/eff.html>
- Palmer, P. J. (1993). *To know as we are known: Education as a spiritual journey*. San Francisco, CA: HarperCollins.
- Palmer, P. J. (1997). The heart of a teacher: Identity and integrity in teaching. *Change Magazine*, 29(6), 14-21.
- Palmer, P. J. (1998). *The courage to teach: Exploring the inner landscape of a teacher's life*. San Francisco, CA: Jossey-Bass Publishers.
- Palmer, P. J. (2003). Teaching with heart and soul: Reflections on spirituality in teacher education. *Journal of Teacher Education*, 54(5), 376-385.
- Paloutzian, R. F., Jackson, S. L., & Crandall, J. E. (1978). Conversion experience, belief system, and personal and ethical attitudes. *Journal of Psychology and Theology*, 6, 266-275.
- Pals, D. L. (2006). *Eight theories of religion*. New York, NY: Oxford University Press.
- Paneque, O. M., & Barbeta, P. M. (2006). A study of teacher efficacy of special education teachers of English language learners with disabilities. *Bilingual Research Journal*, 30(1), 171.
- Park, C., Cohen, L. H., & Herb, L. (1990). Intrinsic religiousness and religious coping as life stress moderators for Catholics versus Protestants. *Journal of Personality and Social Psychology*, 59(3), 562-574.
- Penrose, A., Perry, C., & Ball, I. (2007) Emotional intelligence and teacher self efficacy: The contribution of teacher status and length of experience. *Issues in Educational Research*, 17(1), 107-126.
- Peterson, C. (2000). The future of optimism. *American Psychologist*, 55, 44-55.
- Pew Forum on Religion and Public Life. (2008). *U.S. Religious Landscape Survey*, Retrieved December 22, 2009, from http://religions.pewforum.org/pdf/comparisons-all_beliefs.pdf

- Podell, D., & Soodak, L. (1993). Teacher efficacy and bias in special education referrals. *Journal of Educational Research, 86*, 247-253.
- Powell, L. H., Shahabi, L., & Thoresen, C. E. (2003). Religion and spirituality: Linkages to physical health. *American Psychologist, 58*(1), 36-52.
- Rastegar, M., & Memarpour, S. (2009). The relationship between emotional intelligence and self-efficacy among Iranian EFL teachers. *An International Journal of Educational Technology and Applied Linguistics, 37*, 700-707.
- Richards, J. (2005, April). *Principal behaviors that encourage teachers: Perceptions of teachers at three career stages*. Paper presented at the Annual Meeting of the American Educational Research Association, Montreal, QC.
- Ritchie, K. R. (2006). *A comparison of the self-efficacy scores of preservice teachers based on initial college experience*. Unpublished doctoral dissertation, University of North Texas, Denton, TX.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80*, 1-28.
- Ryan, H. D. (2007). *An examination of the relationship between teacher efficacy and teachers' perceptions of their principals' leadership behaviors*. Unpublished doctoral dissertation, University of North Texas, Denton, TX.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78.
- Sagor, R. (2000). *Guiding school improvement with action research*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Salkind, N. J. (2004). *Statistics for people who (think they) hate statistics*. Thousand Oaks, CA: Sage Publications.
- Santa Fe Independent School District v. Doe*, 530 U.S. 290 (2000).
- Scheier, M. F., & Carver, C. S. (1985). Optimism, coping and health: Assessment and implications of generalized outcome expectancies. *Health Psychology, 4*, 219-247.
- Scheier, M. F., & Carver, C. S. (1987). Dispositional optimism and physical well-being: The influence of generalized outcome expectancies on health. *Journal of Personality, 55*, 169-210.
- Schlehofer, M. M., Omoto, A. M., & Adelman, J. R. (2008). How do “religion” and “spirituality” differ? Lay definitions among older adults. *Journal for the Scientific Study of Religion, 47*(3), 411-425.

- Schmoker, M. (2006). *Results NOW: How we can achieve unprecedented improvements in teaching and learning*. Alexandria, VA: Association of Supervision and Curriculum Development.
- School District of Abington Township v. Schempp*, 364 U.S. 298 (1960).
- Seligman, M. (1998). Positive social science. *APA Monitor*, 29(2), 5.
- Seligman, M. (2002). Positive psychology, positive prevention, and positive therapy. In C. Synder & S. Lopez (Eds.), *Handbook of positive psychology* (pp. 3-12). New York, NY: Oxford.
- Seligman, M. (2006). *Learned optimism: How to change your mind and your life* (2nd ed.). New York, NY: Pocket Books.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55, 5-14.
- Smith, T. B, McCullough, M. E., & Poll, J. (2003). *Psychological Bulletin*, 129(4), 614-636.
- Solomon, J., & Hunter, J. (2002). A psychological view of spirituality and leadership. *School Administrator*, 598, 38-41.
- Soodak, L., & Podell, D. (1997). Efficacy and experience: Perceptions of efficacy among preservice and practicing teachers. *Journal of Research and Development in Education*, 30, 214-221.
- Speck, B. W. (2005). What is spirituality? *New Directions for Teaching and Learning*, 104, 3-13.
- Spilka, B., Pelligrini, R. J., & Dailey, K. (1968). Religion, American values and death perspectives. *Sociological Symposium*, 1, 57-66.
- Staver, M D. (2005). *Teacher's rights on public school campuses*. Broadman & Holman Publishers: Nashville, TN.
- Steger, M. F., & Frazier, P. (2005). Meaning in life: One link in the chain from religiousness to well-being. *Journal of Counseling Psychology*, 52(4), 574-582.
- Strickland, B. R., & Schaffer, S. (1971). I-E, I-E, & F. *Journal for the Scientific Study of Religion*, 10, 366-369.
- Strickland, B. R., & Weddell, S. C. (1972). Religious orientation racial prejudice, and dogmatism: A study of Baptists and Unitarians. *Journal for the Scientific Study of Religion*, 11, 395-399.
- Stone v. Graham*, 449 U.S. 39 (1980).
- Suhor, C. (1998-99). Spirituality—letting it grow in the classroom. *Educational Leadership*, 56(4), 12-16.

- Suma-Belanger, B. (2006). *The moral educator and the transcendental awe of every day teaching: A heuristic case study*. Unpublished doctoral dissertation, Aurora University, Illinois.
- Sutton, R. E., & Wheatley, K. F. (2003). Teachers' emotions and teaching: A review of the literature and directions for future research. *Educational Psychology Review, 15*(4), 327-358.
- Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Needham Heights, MA: Allyn and Bacon.
- Tagger, I. T. C. (2006). *The effect of student teaching on teacher efficacy among preservice physical educators*. Unpublished doctoral dissertation, Michigan State University, East Lansing, MI.
- Thomas v. Review Board of the Indiana Employment Sec. Div.*, 450 U.S. 707, 714, 101 S. Ct. 1425, 67 L. Ed. 2d 624 (1981).
- Thompson, A. D. (1974). Open-mindedness and indiscriminate antireligious orientation. *Journal for the Scientific Study of Religion, 13*, 471-477.
- Thompson, C. M. (2000). *The congruent life: Following the inward path to fulfilling work and inspired leadership*. San Francisco: Jossey-Bass.
- Tiger, L. (1979). *Optimism: The biology of hope*. New York, NY: Simon & Schuster.
- Tinker v. Des Moines Independent School District*, 393 U.S. 503 (1969).
- Tomlinson, C. A. (1999). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: Association of Supervision and Curriculum Development.
- Tschannen-Moran, M., Woolfolk Hoy, A., & Hoy, W. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*(2), 202-248.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education, 17*, 783-805.
- Tschannen-Moran, M., & Hoy, A. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching & Teacher Education, 23*(6), 944-956.

- Tufaro, G., (2007), *Borden v. East Brunswick School District, No. 05-5923 (D. N.J. July 25, 2006)* Retrieved March 22, 2010, from <http://www.nsba.org/MainMenu/SchoolLaw/Issues/Religion/RecentCases/BordenvEastBrunwickschooldistrictNo055923DNJJuly252006.aspx>
- Vitell, S. J., Paolillo, J. G. P., & Singh, J. J. (2005). Religiosity and consumer ethics. *Journal of Business Ethics*, 57(2): 175-181.
- Wallace v. Jaffree*, 472 U.S. 38 (1985).
- Warren, R. (2002). *The purpose driven life: What on earth am I here for?* Grand Rapids, MI: Zondervan.
- Weber, M. (1922). *The sociology of religion*. Boston, MA: Beacon Press.
- Weber, M. (1958). *The protestant ethic and the spirit of capitalism*. New York, NY: Charles Scribner's Sons.
- Wheatley, M. J. (2002). Spirituality in turbulent times. *School Administrator* 59(8), 42-46.
- Wiggins, G. & McTighe, J. (2005). *Understanding by design* (2nd ed.). Alexandria, VA: Association of Supervision and Curriculum Development.
- Williams, J. S. (2001). *Creativity, connectedness, and the spirit of teaching: Factors that contribute to renewal and longevity of exemplary teachers*. Unpublished doctoral dissertation: Western Carolina University.
- Wineberg, T. (2008). *Professional care and vocation: Cultivating ethical sensibilities in teaching*. Rotterdam: Sense Publishers.
- Woolfolk, A. E., & Hoy, W. (1990). Prospective teachers' sense of efficacy and beliefs about control. *Journal of Educational Psychology*, 82(1), 81-91.
- Woolfolk Hoy, A. (2008). What motivates teachers? Important work on a complex question. *Learning and Instruction*, 18, 492-498.
- Woolfolk Hoy, A., Hoy, W. K., & Kurz, N. M. (2008). Teacher's academic optimism: The development and test of a new construct. *Teaching and Teacher Education*, 24, 821-835.
- Worden, S. (2005) Religion in strategic leadership: A positivistic, normative/theological, and strategic analysis. *Journal of Business Ethics*, 57, 221-239.