

NO CHILD LEFT BEHIND: HIGH-STAKES TESTING
AND TEACHER BURNOUT IN URBAN ELEMENTARY SCHOOLS

by

Anne Marie Hanson

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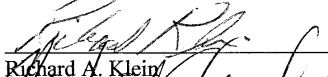
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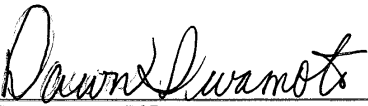
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ABSTRACT

The No Child Left Behind Act of 2001 calls for 100% proficiency in reading and mathematics by 2014. The mandate thus transforms reading and mathematics into high-stakes subject areas. This quantitative cross-sectional study examined legislated testing mandates in relation to burnout subscales, emotional exhaustion, depersonalization, and personal accomplishment. Second through fifth grade high-stakes reading and mathematics teachers and low-stakes art, music, and physical education teachers working in an urban elementary school district completed the Maslach Burnout Inventory – Educator Survey and a demographic survey. Results showed a significant difference in emotional exhaustion among high-stakes versus low-stakes subject area teachers across grade levels and school labels. Since burnout impedes job performance, results suggest the achievement gap may widen because of the very legislation instituted to close it.

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In the interest of avoiding redundancy and stress, I have foregone the inclusion of a dedication page. To whom would I assign special recognition when so many individuals have helped me accomplish my dream to become a doctor of educational leadership? Without concern for sentence or paragraph length, syntactical structure, or passive voice, my liberated spirit commences to thank the special individuals who were an integral part of my doctoral journey.

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TABLE OF CONTENTS

LIST OF TABLES	xv
LIST OF FIGURES	xvi
CHAPTER 1: INTRODUCTION.....	1
Background of the Problem	3
Statement of the Problem.....	7
Purpose of the Study	9
Significance of the Study	10
Significance to Leadership.....	11
Nature of the Study	12
Research Questions.....	17
Hypotheses.....	21
Conceptual Framework.....	25
Six Areas of Job-Person Mismatch	26
Resiliency	31
No Child Left Behind Workplace	32
Definitions of Terms	34
Assumptions.....	37
Scope and Limitations.....	39
Delimitations.....	40
Summary	42
CHAPTER 2: REVIEW OF THE LITERATURE.....	45
Burnout	46
Origins of Burnout Theory	46
Burnout's Symptoms	48

Multidimensional Syndrome	50
Measuring Burnout.....	53
Teacher Burnout	54
Six Areas of Organizational Life.....	59
Why Teacher Burnout Matters	60
Conclusion.....	63
No Child Left Behind Accountability.....	63
Origins of No Child Left Behind Accountability	65
Equality	66
Safety.....	67
Economics	67
Multifaceted Legislation.....	69
High-Stakes Testing	70
Consequences of Success and Failure	71
Opposing Viewpoints on No Child Left Behind's Testing Mandates	73
Concluding Viewpoint	81
The High-Stakes Testing Workplace	81
High-Stakes Subject Areas.....	84
High-Stakes Grade Levels.....	85
High-Stakes Report Card Labels.....	85
High-Stakes Grade Levels and Elementary School Teachers	87
Conclusion	88
Summary	89
CHAPTER 3: METHOD	91

Design Appropriateness	93
Population	104
Sampling	108
Data Collection Process	111
Instrumentation	113
External Validity	117
Internal Validity	118
Data Analysis	119
Summary	123
CHAPTER 4: RESULTS	125
Pilot Study	127
Data Collection Process	128
Data Analysis Preparation	130
Sample Population	131
Preliminary Analyses	132
Cronbach's Alpha Testing	132
Descriptive Statistics: Normative Data	132
Descriptive Statistics: Research Questions	135
Analyses of Research Questions	140
Research Questions 1, 4, and 7	141
Research Question 1	141
Research Question 4	145
Research Question 7	146
Research Questions 2, 5, and 8	148
Research Question 2	148

Research Question 5	149
Research Question 8	149
Research Questions 3, 6, and 9	151
Research Question 3	151
Research Question 6	152
Research Question 9	152
Summary	155
Null Hypotheses 1, 4, and 7	155
Null Hypotheses 2, 5, and 8	156
Null Hypotheses 3, 6, and 9	157
CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS	159
Summary of the Purpose	159
Burnout and No Child Left Behind	160
Limitations of Study	161
Discussion of the Research Questions	162
Research Question 1	163
Research Question 2	163
Research Question 3	164
Emotional Exhaustion and No Child Left Behind	164
Research Question 4	168
Research Question 5	169
Research Question 6	169
Depersonalization and No Child Left Behind	170
Research Question 7	172

Research Question 8.....	173
Research Question 9.....	173
Reduced Personal Accomplishment and No Child Left Behind.....	174
Recommendations for Future Research.....	176
Ethical Implications.....	178
Summary of Results.....	180
References.....	181
Appendix A Demographic Survey Instrument.....	205
Appendix B Maslach Burnout Inventory and Permission to Use.....	206
Appendix C Script for Research Assistants Administering Survey.....	214
Appendix D Informed Consent to Conduct Research.....	221
Appendix E University of Phoenix Informed Consent Agreement.....	222

LIST OF TABLES

Table 1 <i>Null and Alternative Hypotheses</i>	22
Table 2 <i>Search for Teacher-Related Burnout Studies</i>	56
Table 3 <i>Null and Alternative Hypotheses</i>	100
Table 4 <i>Population of Teacher Respondents</i>	110
Table 5 <i>Means and Standard Deviations for the MBI Subscales</i>	121
Table 6 <i>Categorization of MBI Scores for Teacher Subgroup</i>	122
Table 7 <i>Categorization of Teacher Population</i>	123
Table 8 <i>Means and Standard Deviations for the MBI Subscales</i>	133
Table 9 <i>Range of Experienced Burnout</i>	134
Table 10 <i>Research Question Subsets and Sample Population</i>	136
Table 11 <i>Burnout by Subject Area, Research Questions 1, 4, and 7</i>	137
Table 12 <i>Burnout by High-Stakes Subject Area and Grade, Research Questions 2, 5, and 8</i>	138
Table 13 <i>Burnout by Subject Area and School Label, Research Questions 3, 6, and 9</i> .	139
Table 14 <i>Sample Population by Gender, Age, Number of Years Teaching</i>	143
Table 15 <i>Analysis of Variance for Emotional Exhaustion by Gender</i>	144
Table 16 <i>Pearson Correlations on Emotional Exhaustion</i>	145
Table 17 <i>Analysis of Variance for Burnout by Subject Area</i>	147
Table 18 <i>Analysis of Variance of High-Stakes Subject Area Teachers by Grade Level</i> .	150
Table 19 <i>Analysis of Variance by Subject Area and Report Card Label</i>	154

LIST OF FIGURES

Figure 1. Conceptual framework designed for the study 28

Figure 2. Research design map by null hypotheses and demographics 92

CHAPTER 1: INTRODUCTION

In 1983, *A Nation at Risk* (National Commission, 1983) announced the existence of a crisis in the public school system that had placed the nation's "unchallenged preeminence" (§ 1) at risk. Some researchers have argued that the National Commission's report is a manufactured crisis (Amrein & Biddle, 2002; Bracey, 2006). Notwithstanding, the public school system indeed faces a crisis in the form of serious teacher shortages (Darling-Hammond, 2003; National Education Association, 2005) and attrition (Inman & Marlow, 2004; Luekens, Lyter, & Fox, 2004). However, public education today is also challenged with a greater problem regarding the accountability demands of the No Child Left Behind Act of 2001 (2002).

Teacher workload demands and pressures have increased greatly (Kohn, 2005; Mandel, 2006) due to federal legislation (No Child Left Behind Act of 2001, 2002) mandating that all public school students be proficient in mathematics and reading by 2014 as determined by reported test results at designated grade levels (§ 1111). Schools whose test scores fail to demonstrate *adequate yearly progress* (§ 1225) are labeled as schools needing *improvement* (§ 1225). Consequently, the demands on mathematics and reading teachers are now greater than demands placed on colleagues teaching art, music, and physical education. Evidence already exists that dissatisfaction with testing mandates has increased teacher stress and lowered morale (Boaler, 2003; Inman & Marlow, 2004; Nathan, 2002; Noddings, 2005; Sunderman, Tracey, & Orfield, 2003) particularly among teachers assigned to highly accountable subject areas and test-reporting grade levels (Kohn, 2005; Pedulla et al., 2003; Stecher & Barron, 2001; Taylor, Shepard, Kenner, & Rosenthal, 2003). If left unchecked, stress and lowered morale pose a serious

consequence, *burnout*, a multidimensional syndrome that includes three psychological stressors: emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Jackson, 1981; Maslach et al., 1996).

Byrne (1993) has described burnout as “the inability to function effectively in one’s job as a consequence of prolonged job-related stress” (p. 197). Consequently, today’s public education crisis concerns the question of whether No Child Left Behind mandates have created an unhealthy work environment in which public school teachers responsible for teaching mathematics and reading are suffering the debilitating (Farber & Escher, 1991; Hughes, 2001; Maslach, 1976; Maslach & Jackson, 1981; Maslach, Schaufeli, & Leiter, 2001) job-related stress of teacher burnout.

Chapter 1 introduces readers to the problem within public education today concerning the No Child Left Behind Act of 2001 (2002) legislation that calls for 100% proficiency among all students in mathematics and reading by 2014 (§ 1111). The chapter supports the quantitative cross-sectional survey study whose research questions addressed the influence the legislative mandate may have on reported levels of burnout among urban elementary school teachers. The chapter introduces the dependent variable, teacher burnout, as manifested by reported levels of emotional exhaustion, depersonalization, and personal accomplishment (Maslach & Jackson, 1981; Maslach et al., 1996). The chapter introduces subject area taught as the independent variable and grade level taught and school report card label earned as mediating variables.

The initial section in Chapter 1 provides background information about teacher burnout and problematic mandates within the No Child Left Behind Act of 2001 (2002) legislation. The next sections address the (a) problem and purpose statements, which

inform readers why a study on teacher burnout among urban elementary school teachers was necessary; (b) nature and conceptual framework of the quantitative cross-sectional survey study; and (c) significance of the study to burnout research and education leadership. Subsequent sections address (a) research questions and hypotheses; (b) definitions of terms; (c) assumptions associated with the study; and (d) limitations and delimitations. Chapter 1 concludes with a summary highlighting key points within the chapter. Having presented an overview of its contents, Chapter 1 continues with a discussion of the background of the problem.

Background of the Problem

Upon the passage of the reauthorization of the Elementary and Secondary Education Act (ESEA) of 1965, namely, the No Child Left Behind Act of 2001 (2002), former Secretary of Education Paige (as cited in U.S. Department of Education, 2002) declared the legislation had led the nation into a “new era in how we educate our children” (p. viii). Satisfying and expanding earlier demands for accountability and standards-based reform (National Commission, 1983; Goals 2000, 1996), the legislation reestablished the federal government’s commitment to poor and minority students initiated by ESEA. Its purpose statement states the legislative goal: “closing the achievement gap between high- and low-performing children, especially the achievement gap between minority and nonminority students and between disadvantaged children and their more advantaged peers” (No Child Left Behind Act of 2001, 2002, § 1001).

To achieve the goal of closing the achievement gap the legislation called for 100% of the nation’s public school students to become proficient in mathematics and reading by 2014 (§ 1111). Research findings (Sunderman et al., 2004; Taylor et al., 2003) have suggested that the increased accountability to standardized testing and reporting

have increased teacher dissatisfaction and stress particularly among teachers in elementary schools where the effects of educational reform are felt first (Education Trust, 2004). Yet to be determined was whether reported symptoms of dissatisfaction and stress from increased accountability aimed at closing the achievement gap were, in fact, symptoms of teacher burnout.

The achievement gap, the “performance differentials among the various racial . . . [and] ethnic groups and between children from poor families and those from middle class or well-off families” (Popham, 2004, p. 46) has been viewed as the public education system’s greatest failure (Rothstein, 2004). Although educational reform measures have sought to address the achievement gap (National Commission, 1983; ESEA, 1965; Goals 2000, 1996), the gap has persisted. From the seminal *Coleman Report* (Coleman, Campbell, Hobson, McParland, Mood, Weinfeld, & York, 1966) to the current National Council for Education Statistics (NCES) study, *Conditions in Education 2004* (U.S. Department of Education, 2004), findings have shown consistently that poverty and (minority) ethnicity negatively influence student achievement (Ku & Plotnick, 2003). As one educator (Harvey, 2003) observed: “As poverty goes up, test scores go down” (p. 18).

The controversy over the achievement gap notwithstanding, *No Child Left Behind* has upheld its purpose to close the achievement gap (Center on Education Policy, 2006). In the interim, recent findings have suggested that teachers charged with closing the achievement gap, namely, those teaching low socioeconomic and minority children, report increased stress and reduced morale related to mandated testing (Pedulla et al., 2003; Sunderman et al., 2004; Taylor et al., 2003). By mandating mathematics and

reading proficiency standards and concomitant standardized testing, the No Child Left Behind Act of 2001 (2002) has legislated what has been termed *high-stakes testing* (Gunzenhauser, 2003).

Gunzenhauser (2003) described high-stakes testing as follows:

‘High-Stakes Testing’ refers to the use of standardized testing measures as criteria for determining the quality of schools, promotion of children to the next grade, high school graduation, teacher bonuses, or the governance of a school. . . . The No Child Left Behind . . . Act of 2001 expands the role of high-stakes testing by legislating their incorporation in states’ school accountability programs. (p. 53)

As mandated by the No Child Left Behind legislation, high-stakes testing results become part of each state’s school accountability program (U.S. Department of Education, 2003). The accountability programs must include reporting systems that inform the public about the federal report card labels assigned to each district school.

Schools within each district earn federal report card labels based largely on the test results of students from grade levels within three grade spans, 3-5; 6-9; and 10-12. In Arizona, federal labels are based on whether students in grades 3, 5, 8, and 10 (“State of Arizona,” 2003) have satisfied prescribed achievement goals. Federal report card labels identify whether each school has made adequate yearly progress. Schools failing to make adequate progress are labeled as needing improvement (U.S. Department of Education, 2003). A school faces serious sanctions should the students of the mathematics and reading teachers at reporting grade levels fail to make adequate progress especially if they fail for several years. The sanctions then include the replacement of some or all of the school staff.

In effect, regardless of the subject area or grade level taught, any or all teachers can be replaced (U.S. Department of Education, 2003) based on results emanating from the mathematics and reading test scores produced by the students of teachers assigned to test-reporting grades. Because of the high stakes (Gunzenhauser, 2003) connected to mathematics and reading and the high stakes connected to specific test-reporting grade levels, No Child Left Behind testing mandates have created what the current study terms high-stakes subject areas and high-stakes grade levels. The putative effect of both variables is the threat they pose to the psychological well being of some, not all, teachers. For example, Stecher & Barron (2001) found that high-stakes testing and reporting systems influenced higher levels of reported dissatisfaction, stress, and reduced morale in teachers assigned to high-stakes subject areas at “milepost grades” (p. 259), the term Stecher and Barron assigned to test-reporting (high-stakes) grade levels.

Additional concern emerges when considering the well being of teachers at the elementary level. Results from recent studies (Luekens et al., 2004; Pedulla, Abrams, Madaus, Russell, Ramos, & Miao, 2003; Sunderman et al., 2004) have shown that the majority of teachers reporting dissatisfaction, increased stress, and reduced morale were elementary school teachers. Findings from other research (Education Trust, 2004) suggested the effects of legislated reform like that of No Child Left Behind are generally felt first at the elementary school level. Moreover, findings (Stecher & Barron, 2003) related to reduced morale among elementary school teachers suggested reduced morale may be even greater for teachers assigned to test-reporting subject areas (such as mathematics and reading) or to test-reporting grade levels. For elementary schools in

Arizona, the (high-stakes, federal) test-reporting grade levels are grades 3 and 5 (“State of Arizona,” 2003).

When considering the high-stakes subject area elementary school teachers who work in urban settings, concern increases further. Elementary school teachers working in the urban setting may face greater levels of stress and reduced morale related to No Child Left Behind testing and proficiency mandates since the achievement gap is most prevalent in the urban setting according to the NCES (U.S. Department of Education, 2004). Ironically, teachers working in the urban setting are the very teachers who must work at optimal levels of performance if they are to help minority and impoverished students achieve proficiency in mathematics and reading within No Child Left Behind’s prescribed timeline.

Ultimately, the essential issue and potential crisis in education today pertains to the reported symptoms of dissatisfaction, increased stress, and reduced morale associated with the No Child Left Behind high-stakes testing mandates. Teachers’ symptoms may be, in actuality, the prolonged stress symptoms of teacher burnout (Byrne, 1993). Hughes (2001) has argued: “Negative shifts cannot be ignored because they have the potential to affect the teacher and the educational system” (p. 289). Moreover, “Even small numbers of seriously disaffected [burned-out] teachers may adversely influence the functioning of a school” (Farber, 1991, p. 201).

Statement of the Problem

Of the 4,195 teachers surveyed in a national study (Pedulla et al., 2003) related to high-stakes testing, 79% of elementary school teachers reported feeling significant pressure associated with high-stakes testing. Compared to teachers at other grade levels, 43% reported they wanted to transfer out of high-stakes grade levels versus 24% of high

school and 29% of middle school teachers. Pedulla et al. attributed the significant disparity to the greater responsibilities assumed by some elementary teachers, namely, those responsible for teaching two or more high-stakes subject areas. The No Child Left Behind Act of 2001 (2002) has called for 100% of nation's students to reach proficiency in reading and mathematics by 2014 (§ 1111). By doing so, the legislation has distinguished reading and mathematics teachers from art, music, and physical education teachers, essentially dividing the general population of elementary school teachers into high-stakes and low-stakes (Abrams, Pedulla, & Madaus, 2003) subject area teachers. High-stakes subject area teachers must accomplish what public education has yet to do: close the "achievement gaps between minority and nonminority students, and between disadvantaged children and their more advantaged peers" (No Child Left Behind Act of 2001, 2002, § 1001 (3)).

Of the 1,445 teachers working in adequate progress or improvement schools located in two urban districts servicing low income, minority students (Sunderman et al., 2003, almost 50% reported that No Child Left Behind sanctions were unfair to schools needing improvement. Moreover, 40.9% of improvement-school teachers, versus 34.9% of adequate progress-school teachers, reported the legislation had reduced morale. Research findings on burnout have consistently indicated that dissatisfaction, pressures, and reduced morale from work demands compromise job effectiveness (Evers, Brouwers, & Tomic, 2002; Linden, Keijsers, Eling, & Schaijk, 2005; Maslach & Jackson, 1981; Maslach et al., 2001). Such symptoms are reportedly higher among high-stakes subject area teachers, particularly those working in urban elementary school districts (Pedulla et al., 2003; Sunderman et al., 2003). If high-stakes subject area teachers working in urban

elementary schools are, in fact, suffering from burnout, they may be incapable of closing the achievement gap, since findings from a growing body of evidence have indicated burnout impedes job performance (Evers et al., 2002; Hughes, 2001; Linden et al., 2005; Maslach et al., 2001).

Purpose of the Study

The purpose of the quantitative cross-sectional survey study was to compare the differences in the reported levels of burnout between second through fifth grade high-stakes and low-stakes subject area teachers working in a large urban elementary school district in Arizona. The study also examined the extent to which grade level taught and report card label earned influenced differences in reported levels of burnout. Teacher age, gender, and number of years teaching served as secondary independent variables (Cone & Foster, 2001) that would be examined for any rejected null hypotheses related to the following variables.

The independent variable was defined generally as subject area taught, with mathematics and reading defined as high-stakes (Gunzenhauser, 2003) subject areas. Art, music, and physical education were defined as low-stakes (Abrams et al., 2003) subject areas, low-stakes denoting areas without any known consequences related to test scores. The dependent variable, burnout as manifested by emotional exhaustion, depersonalization, and reduced levels of personal accomplishment (Maslach & Jackson, 1981; Maslach et al., 1996), was defined generally as “the inability to function effectively in one’s job as a consequence of prolonged job-related stress” (Byrne, 1993, p. 197). For the mediating variable, grade level taught, grades 3 and 5 were defined as high-stakes grade levels. Grades 2 and 4 were defined as low-stakes grade levels. For the mediating

variable, school report card label, the term improvement was defined as the high-stakes label. Adequate progress was defined as the low-stakes label.

A burnout instrument (Maslach et al., 1996) and a demographic survey assessed the research questions by measuring reported levels of emotional exhaustion, depersonalization, and personal accomplishment. Descriptive statistics were used to describe results generated by the responses of the sample population. Analysis of variance (ANOVA) tests analyzed how the burnout (emotional exhaustion, depersonalization, and personal accomplishment) was affected by the subject area taught, grade level taught, and school report card label earned.

Significance of the Study

More serious than findings concerning teacher shortages (Darling-Hammond, 2003; National Education Association, 2005) and teacher attrition (Inman & Marlow, 2004; Luekens et al., 2004) are findings (Pedulla et al, Stecher & Barron, 2003; Sunderman et al., 2004) that urban elementary school teachers report they are suffering from symptoms suggestive of burnout. The prospect of burned-out teachers remaining in the classroom represents a serious threat to the entire educational process (Hughes, 2001). Ignoring burnout's negative influence on teacher job performance (Maslach et al., 1996; Maslach et al., 2001) is problematic since the exhaustion and stress experienced by teachers diminishes their work output capacity (Farber, 1991).

Research findings have shown that teacher burnout levels vary dependent upon factors such as gender, age, (Bakker, Demerouti, & Schaufeli, 2002; Gold, 1985) and location (Abel & Sewell, 1999; Farber & Ascher, 1991). However, no research was found that examined teacher burnout levels based on high-stakes testing variables emerging from the No Child Left Behind Act of 2001 (2002) legislation. The new study addressed

the Evers et al. (2002) call for new burnout studies whenever new programs occur. The study also addressed the Gunzenhauser (2003) call for “further study and consideration of the role and effects of high stakes associated with accountability policies” (p. 56) such as those legislated by the No Child Left Behind Act of 2001.

The study, which examined the influence of No Child Left Behind’s high-stakes testing mandates on teacher burnout responded to the call for research (Maslach et al., 1996) concerning the impact burnout may have on service recipients, in this case, the nation’s public school children. The study of urban elementary school teachers provided data driven evidence suggesting the legislation negatively influences the productivity of the teachers charged with helping the nation’s neediest children. Consequently, the legislation may have narrowed teacher effectiveness while inadvertently widening the gap between the disadvantaged and advantaged, the minority and nonminority.

Significance to Leadership

If it is true that “the biggest reason for low morale is that reactive leaders add changerelated [sic] work to employees’ already full plates” (Anderson & Anderson, 2001, p. 63), then school leaders can ill afford to ignore their teachers’ emotional health. As Anderson and Anderson have cautioned, “If leaders do not attend to the internal domains and adapt them to the forces of change exerted by the external domains [such as No Child Left Behind legislation] then their change efforts fail” (p. 16). Accordingly, the study examined the effects of No Child Left Behind’s accountability demands to call attention to the psychological well being of the human resource (Bate, Khan, & Pye, 2000) undergirding the structure of legislated testing, timelines, and sanctions, namely, the teachers charged with executing the legislated mandates.

Focused on the well being of teachers, the study has provided education leaders an opportunity to effect meaningful change (Gruenert, 2000, Conclusion) whereby school, district, and union leadership as well as teacher leadership (Ackerman & MaKenzie, 2006) recognize the importance of evaluating the psychological health of teachers and addressing the needs of those who may be experiencing symptoms of burnout.

Further, the study has provided education leaders a new platform. The new platform moves them beyond criticisms of the legislation's underfunded (National Conference, 2005; Orlich, 2004; Weaver, 2003) testing mandates to its potentially negative influence on the psychological well being of teachers, the classroom authorities (Hofmeister & Lubke, 1990) responsible for helping the nation's neediest children and closing the achievement gap.

Nature of the Study

The cross-sectional survey study was designed to examine whether variables emerging from No Child Left Behind legislation influenced different ranges in reported levels of burnout among urban elementary school teachers. The research design helped determine the extent to which the crisis in public education today extended beyond current and projected rates of teacher attrition (Darling, 2003; National Education Association, 2005) and shortages (Inman & Marlow 2004; Luekens et al., 2004). The design helped determine the extent of the crisis posed by burned-out teachers remaining in classrooms and its ramification: the possibility of a widening achievement gap caused by the very measure instituted to close it.

The quantitative cross-sectional study investigated burnout by comparing the differences in burnout levels reported by second through fifth grade urban elementary

school teachers who serve minority and disadvantaged children associated with the achievement gap (No Child Left Behind Act of 2001, 2002, § 1001). According to Creswell (2002), quantitative cross-sectional survey designs are appropriate when seeking to compare the attitudes of two groups. The two groups involved in the study were high-stakes (mathematics and reading) and low-stakes (art, music, or physical education) subject area teachers assigned to high-stakes (third and fifth) or low-stakes (second and fourth) grade levels. The survey study compared the responses of high-stakes and low-stakes subject area teachers to research questions concerning emotional exhaustion, depersonalization, and personal accomplishment. According to Maslach et al. (1996), survey studies are appropriate to measuring burnout levels. Further, when structured around research questions related to workplace concerns, quantitative survey studies are more likely to contribute to the field of burnout than qualitative exploratory studies. Having discussed the appropriateness of the study's research design, its instrumentation is now discussed.

The researcher-prepared demographic survey instrument (see Appendix A) was designed to gather data pertaining to (a) the independent variable, subject area taught; (b) the mediating variable, grade level taught; and (c) secondary independent variables, gender, age, and number of years teaching. Chapter 3 provides additional information on the research design including the method by which each school's report card label was secured.

The study utilized one of several burnout instruments, recognized for their strong validity and reliability (Gold, 1984; Maslach et al., 1996), the *Maslach Burnout Inventory-Educators Survey* (MBI-ES). The survey facilitated the collection of data

related to burnout as manifested by its three subscales, emotional exhaustion, depersonalization, and personal accomplishment. The MBI-ES instrument consists of 22-questions that measure each of the burnout subscales separately. For both the emotional exhaustion and depersonalization subscales, higher scores indicate higher levels of burnout. By contrast, for the personal accomplishment subscale, high scores indicate low levels of burnout, and low scores represent higher levels of burnout, namely, reduced personal accomplishment. Chapter 3 provides a comprehensive discussion of the MBI-ES instrument as well as the methodology of the study.

The MBI-ES and the demographic survey instrument addressed each of the study's research questions. The completed responses to each instrument helped measure reported levels of emotional exhaustion, depersonalization, and personal accomplishment relative to the independent variable, subject area, and the mediating variables, grade level and report card label. SPSS 14.0 for Windows[®] software was used to analyze collected data. Descriptive statistics generated the means and standard deviations of the second through fifth grade urban elementary school teachers. Analysis of variance (ANOVA) tests analyzed how burnout (emotional exhaustion, depersonalization, and personal accomplishment) was affected by subject area taught (mathematics and reading versus art, music, or physical education) and the mediating variables, grade level taught (3 and 5 versus 2 and 4) and school report card label earned (improvement or adequate progress). Discussion continues with a description of the variables related to the study.

The prolonged job-related stress of burnout consists of three measurable subscales, emotional exhaustion, depersonalization, and personal accomplishment. According to the founders of the MBI, Maslach & Jackson, (1981),

the Emotional Exhaustion subscale assesses feelings of being emotionally overextended and exhausted by one's work. The Depersonalization subscale measures an unfeeling and impersonal response towards recipients of one's service, care, treatment, or instruction. The Personal Accomplishment subscale assesses feelings of competence and successful achievement in one's work with people. (p. 1)

Maslach and Jackson (1981) conceptualized burnout as a continuous variable. As such, the three subscales of burnout are assessed using low, moderate, and high ranges. Although the original inventory measured burnout levels based on both frequency and intensity of feelings (Maslach & Jackson, 1981), the current version of the instrument (Maslach et al., 1996) measures burnout levels based on frequency, how often a feeling is experienced. The independent variable, subject area, is now discussed.

The No Child Left Behind Act of 2001 (2002) legislation included the mandate calling for 100% proficiency in mathematics and reading by 2014. The research examined if this disproportionate distribution of workload demand predisposed high-stakes subject area teachers to greater levels of burnout. Besides investigating teacher responses related to subject area taught, the cross-sectional survey study examined two variables to determine whether they had mediating effects on reported burnout levels. The variables were grade level taught and report card label earned.

How well an elementary school's third and fifth grade students perform on high-stakes mathematics and reading tests helps determine each school's federal report card label. The study therefore sought to determine whether grade level had a mediating effect on reported levels of burnout between high-stake subject area teachers assigned to high-

stakes grades 3 and 5 versus low-stakes grades, 2 and 4. Conducting the research within elementary schools was more suitable than middle or high schools, since elementary schools have two federal reporting grade levels, namely, 3 and 5 (“State of Arizona,” 2003, whereas middle schools and high schools each have only one reporting grade, 8 and 10 respectively.

As stated, the test results of third and fifth grade students help determine the federal report card label of each school. Elementary schools within the district in 2004-2005 had earned federal labels representing the categorical range of adequate progress and needing improvement, a characteristic essential to examine the mediating effects of school labels on reported burnout levels. The district selected was also appropriate because of its location in an urban setting. Mindful of the No Child Left Behind goal to help children suffering from the achievement gap (No Child Left Behind Act of 2001, 2002, § 1001), an urban setting was successfully secured for the study. The district’s student population represents the needy children identified by the legislation, with more than 80% minority and 80% disadvantaged and impoverished as determined by the number of students qualified for free and reduced lunch (§ 1113).

Studies (Gold, 1984; Gold 1985; Maslach et al., 1996) have demonstrated consistently that urban secondary teachers reported higher levels of burnout. However, recent studies (Luekens et al., 2004; Pedulla et al., 2003; Sunderman et al., 2004) have indicated that the majority of teachers reporting dissatisfaction, lowered morale, and stress have been elementary school teachers. The findings provided additional support for the selection of an urban elementary school district for the study on burnout.

Research Questions

The research questions of the cross-sectional survey study focused on relationships between reported levels of burnout, as expressed in responses to the emotional exhaustion, depersonalization, and personal accomplishment subscales of the MBI-ES, and variables putatively related to increased workload demands and stress as a consequence of the passage of No Child Left Behind legislation. Research Questions 1-3 related to the burnout subscale of emotional exhaustion. Research Questions 4-6 related to the burnout subscale of depersonalization. Research Questions 7-9 related to the burnout subscale of personal accomplishment.

1. What levels of emotional exhaustion are reported by teachers of high-stakes versus low-stakes subject areas?

2. How do the levels of emotional exhaustion reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4?

3. How do the levels of emotional exhaustion reported by teachers of high-stakes versus low-stakes subject areas change between improvement versus adequate progress schools?

4. What levels of depersonalization are reported by teachers of high-stakes versus low-stakes subject areas?

5. How do the levels of depersonalization reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4?

6. How do the levels of depersonalization reported by teachers of high-stakes versus low-stakes subject areas change between improvement versus adequate progress schools?

7. What levels of personal accomplishment are reported by teachers of high-stakes versus low-stakes subject areas?

8. How do the levels of personal accomplishment reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4?

9. How do the levels of personal accomplishment reported by teachers of high-stakes versus low-stakes subject areas change between improvement versus adequate progress schools?

The research questions outline the comparison of differences in reported levels of burnout as a function of the independent and mediating variables believed to capture increased workplace demands and stress experienced by teachers in today's No Child Left Behind workplace. Research Questions 1, 4, and 7 identified subject area taught as the independent variable. Teachers responsible for reading and mathematics were viewed as facing higher workplace demands and stress. Research Questions 2, 5, and 8 identified grade level taught as a mediating variable. The test-reporting years for Grades 3 and 5 were viewed as burdening third and fifth grade reading and mathematics teachers with higher workplace demands and stress. Research Questions 3, 6, and 9 identified federal report card labels as another mediating variable. Schools labeled (needing) improvement rather than adequate were viewed as burdening their reading and mathematics teachers with higher workplace demands and stress when compared to their art, music, and physical education teachers.

Assuming the putative effects of passage of No Child Left Behind legislation on workplace demands and stress occurred as described above, then those effects were likely to be observed in responses to the emotional exhaustion, depersonalization, and personal

accomplishment subscales of the MBI-ES. In other words, scores on the burnout subscales would change in a manner consistent with the effects described in the preceding paragraph. Hence, the cross-sectional survey study systematically examined differences in reported levels of burnout as measured by each of the three subscales (emotional exhaustion, depersonalization, and personal accomplishment) as a function of changes in the type of subject area taught, grade level taught, and school report card label. Discussion continues with an explanation of how the research questions and their concomitant hypotheses accomplished the goals of the quantitative cross-sectional survey study on burnout.

The No Child Left Behind Act of 2001 (2002) mandate calling for 100% proficiency in mathematics and reading by 2014 has placed greater stress and workload demands on teachers of high-stakes subject areas, mathematics and reading, versus low-stakes subject areas, namely art, music, and physical education. The research sought to determine whether the disproportionately distributed workload demands predisposed high-stakes subject area teachers to burnout. If so, burnout's characteristic deterioration (Maslach, 1976; Maslach & Jackson, 1981; Maslach & Pines, 1977; Maslach et al., 1996) in service quality might prevent high-stakes subject area teachers from helping their students reach proficiency by 2014. The importance of learning the extent to which high-stakes subject area teachers suffered from the debilitating effects (Evers et al., 2002; Farber & Ascher, 1991; Hughes, 2001; Linden et al., 2005; Maslach & Jackson, 1981; Maslach & Pines, 1977; Maslach et al., 2001; Roelfs, Verbraak, Keijsers, De Bruin, & Schmidt, 2005) of burnout prompted Research Questions 1, 4, and 7 that examined

differences in reported levels of emotional exhaustion, depersonalization, and personal accomplishment in relation to high-stakes versus low-stakes subject area.

The federally mandated (No Child Left Behind Act of 2001, 2002) reporting system (§ 1112) informs the public whether or not schools have achieved adequate yearly progress. Reporting systems require that each district report the measured progress of its schools by using the achievement scores of students in specific grade levels. In Arizona, the reporting grades are grades 3 and 5 at the elementary school level (“State of Arizona,” 2003). Pressured by the accountability demands placed upon their grade levels’ performance (Stecher & Barron, 2001) on high-stakes tests in mathematics and reading, third and fifth, versus second and fourth, grade teachers may experience greater stress levels than low- stakes subject area teachers of art, music, and physical education (who are assigned to teach multiple grade levels).

Examining the differences in burnout levels reported by high-stakes subject area teachers in grades 3 and 5 versus 2 and 4 helped determine whether burnout levels varied further dependent upon grade level taught. The importance of learning whether third and fifth grade high-stakes subject area teachers suffered from the debilitating effects (Farber & Ascher, 1991; Hughes, 2001; Maslach, 1976; Maslach & Jackson, 1981; Maslach & Pines, 1977; Maslach et al., 2001; Roelofs et al., 2005) of burnout at greater levels than their second and fourth grade counterparts prompted Research Questions 2, 5, and 8 that examined differences in reported levels of emotional exhaustion, depersonalization, and personal accomplishment in relation to high-stakes and low-stakes grade levels.

Teachers have reported increased stress and reduced morale (Boaler, 2003; Inman & Marlow, 2004; Taylor et al., 2003) related to demoralizing reporting systems (Taylor et

al., 2003). Because feelings of increased stress and reduced morale suggest burnout (Maslach & Jackson, 1981; Maslach et al., 1996), the research sought to investigate whether reported burnout levels among high-stakes and low-stakes subject area teachers were further influenced by the legislation's (No Child Left Behind Act of 2001, 2002) mandated reporting system that requires the assignation of adequate progress or improvement labels. Accordingly, teacher burnout was investigated in schools labeled improvement schools and schools earning the more favorable label, adequate progress.

The importance of learning whether high-stakes versus low-stakes subject area teachers working in improvement schools suffered from the debilitating effects (Evers et al., 2002; Farber & Ascher, 1991; Hughes, 2001; Maslach & Jackson, 1981; Maslach et al., 2001) of burnout at differing levels from their counterparts working in adequate progress schools prompted Research Questions 3, 6, and 9 that examined differences in reported levels of emotional exhaustion, depersonalization, and personal accomplishment among high-stakes versus low-stakes subject area teachers in improvement versus adequate progress schools.

The discussion of the research questions described how the questions accomplished the goals of the quantitative cross-sectional survey study on burnout. The next section presents the research questions' concomitant hypotheses.

Hypotheses

The research questions were tested through statistical analyses of survey data. All decisions on the statistical significance of the findings were made using an alpha level of .05. Table 1 presents the research questions' concomitant hypotheses in their null and alternative forms.

Table 1

Null and Alternative Hypotheses

Null Hypotheses	
H1 ₀	There will be no statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes versus low-stakes subject areas.
H2 ₀	There will be no statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.
H3 ₀	There will be no statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.
H4 ₀	There will be no statistically significant difference in the mean depersonalization score for teachers of high-stakes versus low-stakes subject area teachers.
H5 ₀	There will be no statistically significant difference in the mean depersonalization score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.

(table continues)

Table 1 (*continued*)

H6 ₀	There will be no statistically significant difference in the mean depersonalization score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.
H7 ₀	There will be no statistically significant difference in the mean personal accomplishment score for teachers of high-stakes versus low-stakes subject area teachers.
H8 ₀	There will be no statistically significant difference in the mean personal accomplishment score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.
H9 ₀	There will be no statistically significant difference in the mean personal accomplishment score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.
Alternative Hypotheses	
H1 _A	There will be a statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes versus low-stakes subject areas.

(table continues)

Table 1 (*continued*)

H2 _A	There will be a statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.
H3 _A	There will be a statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.
H4 _A	There will be a statistically significant difference in the mean depersonalization score for teachers of high-stakes versus low-stakes subject area teachers.
H5 _A	There will be a statistically significant difference in the mean depersonalization score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.
H6 _A	There will be a statistically significant difference in the mean depersonalization score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.

(table continues)

Table 1 (*continued*)

H7 _A	There will be a statistically significant difference in the mean personal accomplishment score for teachers of high-stakes versus low-stakes subject area teachers.
H8 _A	There will be a statistically significant difference in the mean personal accomplishment score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.
H9 _A	There will be a statistically significant difference in the mean personal accomplishment score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.

This section discussed the study's research questions and hypotheses. The next section, which discusses the study's conceptual framework, (a) discusses how the research integrated burnout theory within the realm of the No Child Left Behind workplace, and (b) includes important perspectives related to burnout and accountability.

Conceptual Framework

At the broadest level, the quantitative cross-sectional study investigated the emotional and psychological health of teachers working under the aegis of No Child Left Behind Act of 2001 (2002). Accordingly, the study measured reported levels of teacher burnout in each of its three subscales: emotional exhaustion, depersonalization, and

personal accomplishment (Maslach & Jackson, 1981; Maslach et al., 1996). Successful implementation of No Child Left Behind mandates requires optimal teacher performance that may not be forthcoming, since research findings have consistently found burnout to interfere with work quality (Maslach & Jackson, 1981; Maslach & Pines, 1977; Maslach et al., 1996).

The following three subsections place the study in perspective among relevant studies on burnout and within the No Child Left Behind contextual setting. The first subsection discusses burnout's three-subscale framework as it interfaces with the more recent framework concerning six areas of job and person mismatch (Maslach et al., 2001). The second subsection discusses resiliency (Strümpfer, 2003), an attribute pertaining to engagement (Maslach et al., 1996; Maslach et al., 2001), the opposite end of the burnout continuum. The third subsection discusses relevant issues and perspectives related to the No Child Left Behind work environment.

Six Areas of Job-Person Mismatch

According to Maslach et al. (1996), burnout involves the crisis experienced by workers in their relationship with their work. Burnout's three-subscale framework "continues to be the predominate one in the burnout field" (Maslach et al., 2001, p. 402). However, recent research on burnout has developed a new theoretical framework (Maslach & Leiter, 1997; Maslach et al., 2001), distinguished from the three-subscale framework by its six areas of job and person mismatch. The description of the three subscales of burnout in relation to the newer framework was intended to enhance readers' understanding of why an unhealthy work environment of job and person mismatch may exist in today's No Child Left Behind public school setting.

The new, expanded framework (Maslach & Leiter, 1997; Maslach et al., 2001) of the burnout syndrome has conceptualized burnout as the mismatch between workers and their jobs. The six areas of mismatch are work overload, lack of control, lack of reward, lack of community, lack of fairness, and value conflict. The expanded framework provides a greater understanding of why burnout occurs and helps illustrate today's No Child Left Behind work environment (see Figure 1).

No Child Left Behind Accountability and High-Stakes Testing Workplace Environment

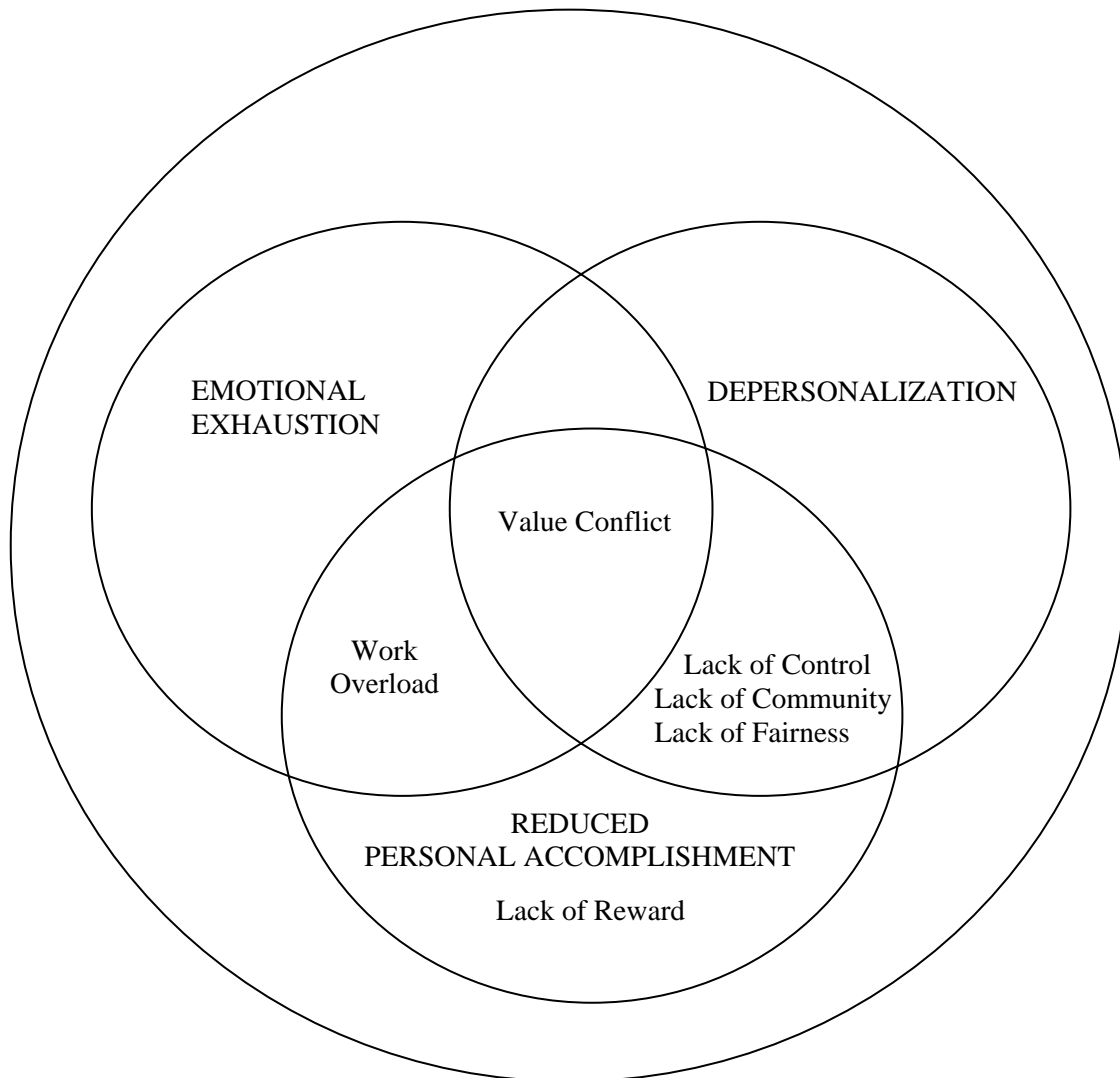


Figure 1. Conceptualized integration of burnout's three subscales and six areas of mismatch (Maslach et al., 2001) within the contextual realm of the No Child Left Behind workplace. Modified and reproduced by special permission of the Publisher, CPP, Inc., Mountain View, CA 94043 from *Maslach Burnout Inventory Manual*, Third Edition, by Christina Maslach, Susan E. Jackson, Michael P. Leiter. Copyright 1996 by CPP, Inc. All rights reserved. Further reproduction is prohibited without the Publisher's written consent.

According to Maslach et al. (1996),

it is unclear if some job-person mismatches are more important than others or if there is some number that will be more likely to produce burnout. . . . [However], each area of mismatch has a distinct relationship with burnout and engagement.

(p. 42)

Based on the new framework, work overload and emotional exhaustion that occurs when workers are expected “to do too much in too little time” (Maslach & Leiter, 1997, p. 10) relates to the workload demands placed upon high-stakes teachers who are expected to close the achievement gap by 2014. Lack of control relates to the depersonalization experienced within the accountable workplace: “There is a world of difference between being accountable and being constrained by rigid policies and tight monitoring” (p. 12). The lack of reward associated with reduced personal accomplishment reflects the feelings of teachers experiencing the “loss of the internal reward that comes when a person takes pride in doing something of importance” (p. 13).

The lack of community associated with both depersonalization and reduced personal accomplishment pervades in the workplace wherein exist anger and frustration (Maslach & Leiter, 1997). Anger and frustration are emotions reportedly experienced by today’s highly accountable teachers (Boaler, 2003; Kohn, 2005; Nathan, 2002). Lack of fairness (Maslach, et al., 2001) associated with exhaustion and cynicism involves workload inequities. Workplace inequities currently exist within the No Child Left Behind work environment where demands placed on high-stakes subject area teachers at high-stakes grade levels are greater than those placed on colleagues with different teaching assignments (Stecher & Barron, 2001).

The final of the six areas that lead to burnout is value conflict (Maslach & Leiter, 1997; Maslach et al., 2001), which occurs when job requirements conflict with personal convictions. Substantiating the interface of value conflict with No Child Left Behind mandates is the growing body of evidence (Boaler, 2003; Bracy & Molnar, 2003; Nathan, 2004; Pedulla et al., 2004) that teachers are not supportive of the high-stakes testing mandates they are contractually obligated to follow. Findings from several studies (Evers et al., 2002; Friedman, 1991; Nummela, 1982) have indicated that teachers working under the aegis of innovative reform measures tend to experience burnout. Starnaman (1992) reported that teachers dissatisfied with excessive workloads also experienced burnout. Moreover, recent studies (Hughes, 2001; Taris, Van Horn, Schaufeli, & Scheurs, 2004) have shown that teachers experiencing burnout do not necessarily leave the profession. The recent findings supported the study's suggestion that teachers working in today's No Child Left Behind workplace may be experiencing burnout symptoms.

Burnout's expanded framework (Maslach et al., 2001) concerning six areas of job and person mismatch was discussed in relation to the predominant three-subscale measure of burnout. The purpose of the subsection was to help readers appreciate why conditions within today's No Child Left Behind workplace justified the study on teacher burnout. The second subsection discusses the concept of resiliency (Patterson, Collins, & Abbott, 2004; Strümpfer, 2003; Sumsion, 2003), currently under investigation in relation to burnout and the burnout-to-engagement continuum (Maslach et al., 1996). The discussion explains why the concept of resilience, unlike the concept of job and person mismatch, remained outside the scope of the quantitative cross-sectional study.

Resiliency

Resiliency has been defined (Sumsion, 2003) as the variable that enables workers to find deep and sustaining satisfaction within their work despite adverse factors that prompt others to leave the field of teaching. More generally, Reivich & Shatté (2002) defined resiliency as the “ability to persevere and adapt when things go awry” (p. 1). Researchers such as Maslach and Leiter (1997) identified resilience as a component of job engagement. More recently, Maslach et al. (2001) reported that unpublished results from international studies viewed engagement as a positive affective state characterized by its own dimensions, among them “vigor, dedication, and absorption” (p. 417) with resilience subsumed under vigor. By contrast, Strümpfer (2003) used the term resilience as the primary descriptor that subsumes engagement and other psychological variables such as meaningfulness, subjective well being, positive emotions, and pro-active coping, noting that all these variables advance workers from burnout and towards burnout’s opposite, engagement.

Findings from qualitative studies, one concerning early childhood teachers (Sumsion, 2003) and another, teachers from four low socioeconomic urban districts (Patterson, 2004) suggested that certain factors positively influenced resilience, enabling educators to overcome personal dissatisfaction and nonsupportive work conditions. Among them were self-insight, awareness, determination, leadership, problem-solving skills, and, in the Patterson et al. study (2004), pre-existing core values. When considering contextual factors, findings from studies (Patterson et al., 2004; Sumsion, 2003) suggested support networks, mentoring (or being mentored), and quality professional development positively influenced resilience.

Sumsion (2003), Strümpfer (2003), and Patterson et al. (2004), have called for further studies into the mechanisms and processes that contribute to resilience. Fryer (2004) favors scholarship that explores work environments, which promote positive attributes like resilience, contending that positive workplace atmospheres may be foundational to organizational well being. Researchers of burnout theory (Maslach et al., 2001) have stated that the development of alternative questionnaires dealing with the opposite of burnout, namely, engagement, promises to provide a better understanding of the realm of worker well being. Currently, there is no current valid and reliable instrument that measures resilience (Strümpfer, 2003). In fact, Strümpfer reported a cursory survey revealed more than thirty constructs and measures related to the general concept of resilience.

The lack of a valid and reliable instrument precluded the efficacy of including resilience within the scope of the quantitative cross-sectional study. Furthermore, the intent of the study was to determine the existence and extent of teacher burnout in the No Child Left Behind public school workplace. The exclusivity of focus was, therefore, appropriate and corroborated by sentiments proffered by Strümpfer (2003) who observed, “I do not deny the harsh realities that produce burnout ... [and] I fully acknowledge too that there are some environments that are so unjust that personal factors are insufficient to resist their affects” (pp. 69–70).

No Child Left Behind Workplace

The environment within the public school setting has changed dramatically since the enactment of the No Child Left Behind Act of 2001 (2002) legislation. Public school teachers have faced unprecedented educational reform measures (Center on Education

Policy, 2006; Harvey, 2003) especially those working in urban settings who face the formidable challenge of teaching children suffering from the achievement gap. Findings from one study (Luekens et al., 2004), a follow up survey study of 8,400 teachers conducted by the NCES showed the number of public school teachers experiencing dissatisfaction increased as the percentage of minority students increased, or when school location was central city (urban) versus rural. Additionally, findings from the NCES-supported study and others (Boaler, 2003; Center on Education Policy, 2006; Mathison & Freeman, 2004; Moon, Callahan, & Tomlinson, 2003; Pedulla et al., 2003; Sunderman et al., 2004; Taylor et al., 2003; Woody, Buttles, Kafka, Park, & Russell, 2004) have shown that teachers in low socioeconomic urban areas reported greater levels of stress and lowered morale related to education reform and high-stakes testing.

While research describing teacher attitudes towards new reform policies have been found (Center on Education Policy, 2006, Sunderman et al., 2004, Woody, Buttles, Kafka, Park, & Russell, 2004), no studies have been found concerning the relationship between the accountability reform measure know as No Child Left Behind and burnout. Studies have discussed the relationship between dissatisfaction and burnout (Cheek, Bradley, Parr, & Lan, 2003; Evers et al., 2002; Maslach et al., 2001; Smethem & Adey, 2005). However, none were found that examined whether the teacher dissatisfaction reported by today's urban public school teachers represents, in fact, symptoms of the multidimensional psychological syndrome of burnout.

Byrne (1993) described burnout as "the final step in a progression of unsuccessful attempts to cope with negative stress conditions" (p. 197). Farber and Ascher (1991), described burnout's interference with extensive thinking processes necessary for teachers

to satisfy accountability challenges (§ 2, ¶ 1). Cheek et al., (2003) described some of burnout's physical symptoms, migraine headaches, nausea, and heart palpitations, for example, as well as some of its emotional symptoms, cynicism, apathy, and alienation. Findings from the quantitative cross-sectional study on teacher burnout in the No Child Left Behind workplace added to the existing body of knowledge on burnout by describing the nature of burnout as manifested in today's high-stakes subject area urban elementary school teachers federally charged with closing the achievement gap (No Child Left Behind Act of 2001, 2002, § 1001).

The conceptual framework section described the study's framework as it relates to burnout's three-subscale and six-area frameworks and the No Child Left Behind work environment. The next section presents the definitions of terms used in the study.

Definitions of Terms

The following section contains definitions that were used in the quantitative cross-sectional study.

Accountability: the process whereby members of the teaching profession must demonstrate they are performing adequately (Popham, 2004).

Adequate Yearly Progress: the term defined by the No Child Left Behind Left Behind Act of 2001 (2002) to indicate that a school's students have met basic proficiency levels on state assessment tests in mathematics and reading. Test results are disaggregated by subgroups according to "race, ethnicity, gender, English language proficiency, migrant status, disability status, and low income status" (U.S. Department of Education, 2003, p. 7).

Adequate Progress Schools: the label representing schools identified as making adequate yearly progress as defined by federal (No Child Left Behind Act of 2001, 2002)

criteria and determined by Arizona's Instruments to Measure Standards (AIMS) test score results from grades 3 and 5 in elementary schools (Arizona Department of Education, 2004).

Burnout: the multidimensional syndrome involving three dimensions, emotional exhaustion, depersonalization, and reduced personal accomplishment (inefficacy), which occur in individuals who work with people in some way (Maslach et al., 1996). Byrne (1993) describes burnout as “the inability to function effectively in one’s job as a consequence of prolonged job-related stress” (p. 197).

Depersonalization: the dimension of burnout associated with self-protecting cynicism (Maslach & Leiter, 1997) and a diminished personal response towards students concerning their care and instruction (Maslach et al., 1996).

Emotional Exhaustion: the dimension of burnout associated with feeling emotionally exhausted, overextended, and drained (Maslach & Leiter, 1997).

Generalist: the term used for elementary school teachers instructing multi-subject curricula (National Board, 2003) to one class or group of students. Generalist was used on the demographic survey instrument to identify fulltime teachers whose contractual obligations include mathematics and reading instruction.

High-Stakes Grade Levels: the term assigned to grades 3 and 5, which are the elementary school grade level years at which students' standardized test score results are used to help determine whether schools have achieved adequately yearly progress as defined by the No Child Left Behind Act of 2001 (2002, § 1111).

High-Stakes Report Card Label: the term assigned to the improvement label assigned to schools failing to make adequate yearly progress, which results in sanctions as mandated by the No Child Left Behind Act of 2001 (2002).

High-Stakes Subject Area: the term given to mathematics- and reading-related subject areas as they are defined by the Arizona Department of Education (2005) academic K-12 standards. To illustrate the meaning of the study's use of the term high-stakes subject area, science will become a high-stakes subject area when it too becomes a mandated testing subject beginning with the 2007-2008 school year.

High-Stakes Subject Area Teacher: the term referring to generalists (National Board, 2003) whose contractual obligations include mathematics and reading instruction.

High-Stakes Testing: the term referring to “the use of standardized testing measures as criteria for determining the quality of schools” (Gunzenhauser, 2003, p. 53). According to Gunzenhauser, the No Child Left Behind Act of 2001 (2002) “expanded the role of high-stakes testing by legislating their incorporation in states’ school accountability programs.”

Improvement Schools: the label representing schools identified as needing improvement, that is, schools failing to make adequate yearly progress as defined by federal No Child Left Behind Act of 2001 (2002) criteria and determined by Arizona's Instruments to Measure Standards test score results from grades 3 and 5 in elementary schools.

Low-stakes: the term denoting categories without “any known consequences attached to test scores” (Abrams et al., p. 22) that was applied throughout the study.

Low-Stakes Subject Area: the term assigned to the subject areas of art, music, and physical education as they are defined by the Arizona Department of Education (2005) academic K-12 standards for the arts and comprehensive health/physical education.

Low-Stake Report Card Label: the term assigned to schools earning the federal adequate progress label mandated by the No Child Left Behind Act of 2001 (2002, § 1225).

Low-Stakes Subject Area Teacher: the term referring to specialty area teachers (National Board, 2003) assigned to teach art, music, or physical education.

Personal Accomplishment: the dimension of burnout associated with feelings of competence, high self-efficacy (Bandura, 1986; Bandura, 1994) and sense of achievement (Maslach et al., 1996). Reduced personal accomplishment indicates burnout.

Standardized Testing: the term assigned to federally mandated, state-prepared, assessment tests whose scores are used to help determine the adequacy of each child's, and each school's, progress (U.S. Department of Education, 2002).

Specialty Area Teacher: the term used to identify fulltime teachers assigned to teach art, music, or physical education (National Board, 2003).

School: the term assigned to public schools under the aegis of the No Child Left Behind Act of 2001 (2002) mandates.

Urban: the term assigned to "a place and the adjacent densely settled surrounding territory that combined have a minimum population of 50,000" (U.S. Department of Education, 2004, p. 192).

Assumptions

Assumptions were compatible with the quantitative cross-sectional study that asked teachers to complete a demographic survey instrument (see Appendix A) and a 22-

question burnout survey, the MBI-ES (Maslach et al., 1996) (see Appendix B for copyright information). The assumptions pertained to three categories relating to (a) the administration of the survey; (b) the role of research assistants; and (c) the role of the Arizona Education Association. Each category of assumptions is now presented.

The first assumption was that administration of the survey would be conducted during regularly scheduled staff meetings to accommodate the suggested (Maslach et al., 1996) group setting that would minimize discussion of the survey's content. The second assumption was that teachers participating in the survey would not know the actual nature of the survey to avoid influencing responses by sensitizing teachers to the burnout issue. The third assumption was that teachers would respond honestly and without concern of reprisal (Maslach et al., 1996) having received oral and written assurance of the survey's anonymity and confidentiality of results.

The fourth through sixth assumptions related to the teacher representatives who served as research assistants. The fourth assumption was that research assistants would familiarize themselves with the researcher-prepared script (see Appendix C) to better communicate to teachers how to complete the anonymous survey. The fifth assumption held that research assistants would remind principals they had agreed to leave the meeting before administration of the survey to afford the recommended (Maslach et al., 1996) optimal comfort to teachers. The sixth assumption was that research assistants would examine completed survey packets to assure all items were marked as suggested by Maslach et al., 1996).

The seventh and eighth assumptions related to the role of the Arizona Education Association (AEA). The seventh assumption was that the AEA vice-president who

offered the organization's financial and strategic support (A. Morrill, personal communication, August 3, 2005) would provide funds and supplies to help defray research costs. The eighth assumption was that the AEA local (district) president would acknowledge AEA's commitment by facilitating the training of teacher representatives.

Scope and Limitations

The scope of the quantitative cross-sectional study limited its examination to the study of burnout, as manifested by emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach et al., 1996), at the elementary school level. The study also limited its examination to burnout relative to variables related to the No Child Left Behind Act of 2001 (2002) legislation calling for proficiency in mathematics and reading by 2014 (§ 1111). The independent variable was subject area taught. The mediating variables were grade level taught and report card label earned. The limited scope was appropriate. Results from the study provided educational leaders an understanding of the implications and challenges associated with high-stakes subject area teachers suffering the debilitating effects (Evers et al., 2002; Farber & Ascher, 1991; Hughes, 2001; Linden et al., 2005; Maslach & Jackson, 1981; Maslach et al., 1996; Roelofs et al., 2005) of burnout at greater levels than low-stakes subject area teachers.

Factors that imposed other limitations on the scope of the quantitative cross-sectional study on burnout included the willingness of teachers at the participating elementary schools to complete the survey. Threats to validity were possible if responses did not represent the entire qualifying population (teachers in grades 2, 3, 4, and 5). If some teachers refused to participate, sample bias would compromise the confidence level pertaining to the analyses of unevenly distributed numbers of teachers categorized by subject area taught, grade level taught, and (school) report card label.

Several steps were taken to avoid threats to statistical validity due to insufficient numbers of teachers surveyed. Eleven eligible elementary schools in the targeted school district agreed to participate in the survey. Categorical data analysis involving teachers from the high-stakes grades, 3 and 5, and the low-stakes grades, 2 and 4, were used instead of discrete samples from grades 2, 3, 4, and 5. Categorization facilitated the analysis of Research Questions 2, 5, and 8 that examined whether grade level taught influenced burnout levels reported by high-stakes subject area teachers. Analysis did not include art, music and physical education (low-stakes) teachers since they teach multiple grade levels and could not, therefore, be categorized into high-stakes and low-stakes grade level teachers.

Information was gathered on Arizona's public school enrollment by county, ethnicity (Arizona Department of Education, 2004a), and school (2004b) to ensure selection of an appropriate urban district in Maricopa, Arizona's largest county. Nonetheless, generalizing results on burnout to the general teacher population of urban districts may be difficult due to inherent differences in the resources available to other urban districts through, for example, the financial support acquired through bond overrides or federal grant money. Final risks to the study's validity involved response bias. Response bias might have occurred if teachers discovered the true nature of the study, or, if they answered less than truthfully because they did not wish to express feelings that were incompatible with the ideals of their profession (Maslach et al., 1996).

Delimitations

A delimitation within the cross-sectional study concerned the dual reporting system used in Arizona (Arizona Department of Education, 2005) involving the No Child Left Behind Act of 2001 (2002) and Arizona's accountability reporting system, AZ

Learns (Arizona Department of Education, 2003). The system includes two sets of accountability criteria, one that satisfies federal mandates (No Child Left Behind Act of 2001, 2002) and the other, state mandates regarding AZ Learns. Consequently, in addition to federal report card labels (improvement and adequate progress), there are state report card labels as well: excelling, highly performing, performing, underperforming, and failing (Arizona Department of Education, 2004). The interaction of the federal and state accountability systems is complex. Schools can achieve excelling status at the state level, while failing to achieve the federal adequate progress label (Arizona Department of Education, 2003-2004). Excluding from the study plans to examine burnout in relation to state labels as well as federal labels represented an acceptable limitation given the complexity inherent in such a cross-referenced analyses of a dual reporting system.

The study investigated data collected from generalists and specialty area teachers assigned to grades with ordinal proximity to one another, 3 and 5 representing high-stakes grade levels, and 2 and 4 representing low-stakes grades. The study did not use data collected from Kindergarten, First Grade, Special Education, or Speech teachers. All teachers attending the meetings at which the surveys were administered were invited to complete the survey. However, the intent of the procedure was to decrease inadvertent distraction to and influence on second through fifth grade teachers, who might have rushed to complete their surveys out of consideration for colleagues with no surveys to complete.

Care was taken to select an urban elementary school district appropriate to the study as will be described in Chapter 3. Attention to the selection process increased the feasibility and desirability (Meltzoff, 1998) of generalizing to the population of urban

elementary school teachers. Nonetheless, caution was taken to avoid generalizing to the population (Fuchs, 1986; Gold, 1985) of all elementary school teachers.

This section discussed the scope, limitations, and delimitations of the quantitative cross-sectional study. The next section summarizes key points presented in Chapter 1.

Summary

The initial key point made in Chapter 1 established the problem as the crisis that exists in the public education workplace concerning the reported increase in teacher workload demands, stress, and reduced morale among urban elementary school teachers (Center on Education Policy, 2006; Pedulla, et al., 2003; Sunderman et al., 2004) related to No Child Left Behind high-stakes testing mandates. No studies were found that investigated whether the reported symptoms were, in fact, burnout's more debilitating (Evers et al., 2002; Farber & Ascher, 1991; Hughes, 2001; Linden et al., 2005; Maslach & Jackson, 1981; Maslach et al., 2001) symptoms of emotional exhaustion, depersonalization, and reduced personal accomplishment. Calling attention to the absence of research examining possible relationships between burnout and No Child Left Behind helped justify the quantitative cross-sectional study that compared the differences in reported levels of burnout among urban elementary school teachers according to subject area taught, grade level taught, and report card label earned.

A second key point concerned terminology that was applied throughout the study. High stakes (Gunzenhauser, 2003) was used to suggest the greater consequences related to testing mandates. Low stakes (Abrams et al., 2003) suggested no known consequences related to testing mandates (see Definitions).

A third key point concerned the dependent variable of burnout in its three subscales, emotional exhaustion, depersonalization, and personal accomplishment

(Maslach et al., 1996). Burnout's subscales were discussed in relation to burnout's newer theoretical framework involving six areas of job and person mismatch (Maslach et al., 2001) that cause burnout: work overload, lack of control, lack of community, lack of reward, lack of fairness, and value conflict. Supporting their pervasiveness within the current No Child Left Behind workplace were current research findings (Center on Education Policy, 2006; Sunderman et al., 2004; Taylor et al., 2003) related to teacher dissatisfaction and lowered morale, especially among urban elementary school teachers (Pedulla et al., 2003). Collectively, the purpose of Chapter 1 was to help readers appreciate the need for a quantitative cross-sectional study that sought to determine the extent to which burnout existed among second through fifth grade teachers working in a large urban elementary school district in Maricopa County, Arizona.

Chapter 2 provides a substantive review of information related to the variables associated with the quantitative cross-sectional study. The review justifies the research questions and research methodology, namely, a quantitative cross-sectional study. The chapter concludes with a summary of key points within the review that justifies the call for the research study that examined the influence certain No Child Left Behind mandates have on teacher burnout among urban elementary school teachers.

Chapter 3 justifies the decision to conduct a quantitative versus qualitative study. With its focus on methodology and design appropriateness, the chapter describes and supports all aspects involved in the quantitative cross-sectional study: (a) method; (b) design appropriateness; (c) population and sampling; (d) data collection process; (e) external and internal validity; and (f) a summary of key points within the chapter. Following the reference section are the appendixes, which include: (a) demographic

survey instrument; (b) permission to conduct research; (c) research assistant script for survey administration; (d) burnout survey instrument; and (e) informed consent agreement.

Chapter 2 now provides its review of the literature concerning variables generated by No Child Left Behind Act of 2001 (2002) legislation, high-stakes subject area, grade level, and report card label, in relation to the dependent variable, burnout, as manifested by emotional exhaustion, depersonalization, and reduced personal accomplishment.

CHAPTER 2: REVIEW OF THE LITERATURE

The literature review's structure was guided by essential issues raised in the previous chapter, which described the background of the problem concerning No Child Left Behind high-stakes testing mandates and their possible influence on burnout in its three dimensions of emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Jackson, 1981; Maslach & Pines, 1977; Maslach et al., 1996). The issues concerned the mandate calling for 100% proficiency in mathematics and reading by 2014 (No Child Left Behind Act of 2001, 2002, § 1111) and whether the mandate has created a crisis in public education that warranted a new study on teacher burnout. The teachers responsible for satisfying high-stakes (Gunzenhauser, 2003) testing requirements are reportedly suffering from stress and lowered morale (Kohn, 2005; Sunderman et al., 2004; Taylor et al., 2003). The research sought to investigate whether such symptoms were, in fact, the debilitating (Evers et al., 2002; Farber & Ascher, 1991; Hughes, 2001; Linden et al., 2005; Maslach & Jackson, 1981; Maslach et al., 2001) symptoms of burnout.

To address the issues raised, Chapter 2 reviews the literature related to burnout in general, and teacher burnout in particular. The chapter also reviews No Child Left Behind legislation and the variables derived from the legislation: high-stakes subject areas, grade levels, and report card labels. Major sections within Chapter 2 include: a) burnout with specific attention to teacher burnout; b) No Child Left Behind accountability with specific attention to high-stakes testing mandates; c) a conclusion that explains how the review's analytical discussions justified the quantitative cross-sectional study and demonstrate its distinction; and d) a summary that identifies salient points covered in the

review. Discussions within Chapter 2 consistently connect the existing body of literature with the quantitative cross-sectional study's design and identify gaps in research that the study sought to fill.

Burnout

According to scholars of burnout (Farber & Ascher, 1991; Maslach, 1976; Maslach & Jackson, 1981; Maslach & Pines, 1977), burnout impedes job performance. Burnout represents “the index of the dislocation between what people are and what they have to do, . . . a malady that spreads gradually and continuously over time, putting people into a downward spiral from which it's hard to recover” (Maslach & Leiter, 1997). To help readers appreciate why teachers implementing No Child Left Behind mandates may be suffering from the burnout malady, this section includes: (a) the origins of burnout theory; (b) burnout’s symptoms as manifested by emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach et al., 1996); (c) what research has discovered about teacher burnout; and (d) why further study of teacher burnout was necessary. Ultimately, the review of literature on burnout sought to provide readers an understanding of the organizational stressors (Bryant & Constantine, 2006; Maslach et al., 2001) and effects of burnout. Understanding the burnout syndrome would help readers decide whether workload and performance pressures (Goldstein & Noguera, 2006; Kohn, 2005) generated by No Child Left Behind have generated “collateral damage” (Eisner, 2005), a burnout crisis in public education that would warrant a new study on teacher burnout. The origins of burnout theory are now reviewed.

Origins of Burnout Theory

The first use of the term burnout occurred in the novel *A Burnt-Out Case*, (Greene, 1961). According to a *New York Times* critic (Davis, 1961), the novel concerned

a tired and detached architect, who, having lost his motivation to work, could "neither suffer nor laugh" (¶ 3). Because symptoms such as the inability to laugh or suffer provided no physical signs of injury, the literally novel concept of burnout was not perceived as a workplace hazard (Maslach & Leiter, 1997). Earning little scholarly consideration, burnout was deemed "pop psychology" (Maslach et al., 2001, p. 398), "fad" (Farber, 2000a, p. 589), and "psychobabble" (Schwab, 1983, p. 21). According to early scholars of burnout theory (Farber, 1984; Maslach, 1976; Maslach & Jackson, 1981) burnout gradually emerged as a phenomenon worth studying because of the early works of Freudenberger (1974), a psychiatrist who examined health care workers who had become demoralized while caring for drug addicts (Farber, 1991). While recognizing Freudenberger's germinal work, Cordes and Dougherty (1993) differentiated Freudenberger's studies as qualitative, based on personal experiences, noting that the empirical study of burnout did not begin until the 1980s through the work of researchers like Iwanicki, Schwab, Maslach, and Jackson. Another difference between Freudenberger's early work on burnout and that of others was Freudenberger's belief (1980) that workers worked harder when faced with emotional exhaustion. By contrast Maslach and Pines (1977) and Maslach and Jackson (1981) found the opposite, namely work productivity deteriorated. The belief in deterioration of work quality continued through the decades to present time (Evers et al., 2002; Schwab, 1983; Maslach et al., 1996; Taris et al., 2004).

While early burnout research focused primarily on care-giving occupations such as nursing (Farber, 2000a; Maslach & Jackson, 1981; Maslach et al., 2001), teachers quickly emerged as the care-giving group most readily identified with the burnout

phenomenon (Farber, 1991). As investigations into burnout continued, researchers (Farber, 1984; Gold, 1984; Gold & Bachelor, 1988, Hock, 1988; Maslach & Pines, 1977; Nummela, 1982; Whiteman, 1985) identified a variety of problems related to teacher burnout. Gold (1985) enumerated them as follows: “disruptive behavior, students' lack of interest in their work, new programs, accountability testing, and excessive paperwork. The list [was] endless” (p. 255). Gold’s 1985 findings demonstrate that accountability testing was recognized early as a problem related to teacher burnout, the psychological syndrome whose symptoms are now reviewed.

Burnout's Symptoms

A review of literature on burnout discloses the many symptoms associated with the syndrome: (a) feeling inconsequential, ineffective, or worn out (Farber, 2000a; Juhasz, 1990; Pines & Maslach, 2002); (b) feeling helpless, physically depleted, and emotionally drained (Gold, 1984); (c) withdrawing and caring less (Mearns & Cain, 2003); and (d) emotional callousness, diminished sense of personal accomplishment, and negative self-assessment (Cordes & Dougherty, 1993; Friedman, 2000). An early study of teacher burnout (Gold, 1985) reported that burned-out teachers had described themselves as “empty, alienated, wasted, let down, and even used-up” (p. 254). The Gold study described burnout itself as “the end product of stress” (p. 254), the symptom which is now discussed.

Maslach and Leiter (1997) described the physical as well as psychological problems associated with burnout, for example, “headaches, gastrointestinal illness, [and] high blood pressure” (p. 19). Although Selye’s (1976) germinal work on stress theory

identified stress as a major influence on such physiological problems, the similarity between the stress and burnout syndromes did not necessarily equate the two syndromes:

Literature often confuses or equates “stress” with “burnout.” Though these two concepts are similar, they are not identical. Stress may have both positive and negative effects (Seyle, 1976); indeed, a certain amount of stress is necessary to motivate action. Moreover, burnout is most often the result not of stress per se (which may be inevitable in teaching) but of unmediated stress – of being stressed and having no “out” (Farber, 1984, p. 326).

Agreeing with Farber (1984) was Friedman (1995), who stated that burnout differed from stress in that burnout was the result of an “unmediated stress” (p. 281). Likewise, Kyriacou (1987) maintained that stress was the experience of unpleasant emotions, frustration or anger, while burnout resulted “from prolonged . . . stress, primarily characterized by physical, emotional and attitudinal exhaustion” (p. 146). Other scholars on burnout theory (Maslach et al., 1996) distinguished burnout from stress further by describing how the two syndromes manifested differently in the workplace. Whereas occupational stress had an opposite, namely a general sense of well being and relaxation, occupational burnout did not.

Rather than consider the differences between burnout and stress, Cherniss (1980) identified similarities between the syndromes, noting that neither stress nor burnout, should they occur, were necessarily total or permanent. Farber (1991) added more insight into the differences between stress and burnout by observing that stress could be positive or negative, whereas burnout was distinctly and exclusively negative. Similarities and differences notwithstanding, Farber argued that ultimately, “in the absence of empirical

data or extensive observational reports they [burnout and stress] are *practically* [original italics] difficult to distinguish" (p. 32). The clearest distinction between stress and burnout involves the multidimensional aspects of the burnout phenomenon (Maslach & Jackson, 1981; Maslach et al., 1996; Maslach et al., 2001) as manifested by: (a) emotional exhaustion; (b) depersonalization; and (c) reduced personal accomplishment also referred to as inefficacy or ineffectiveness (Maslach & Leiter, 1997). The three symptoms of burnout are now discussed.

Multidimensional Syndrome

While comparisons have been drawn between the burnout dimension of emotional exhaustion and stress, Cordes and Dougherty (1993) argued that burnout's two other dimensions, depersonalization and reduced personal accomplishment, distinguished burnout from stress. Cordes and Dougherty, whose work on burnout has been described as comprehensive (Maslach et al., 2001), called burnout's three-component model "unique as a stress phenomenon" (Cordes & Dougherty, p. 625). Identifying the traditional stress variable of emotional exhaustion as burnout's core, Cordes and Dougherty viewed depersonalization as a new construct to stress literature, noting further that while personal accomplishment had been part of stress literature, examining diminished levels of the variable was a new concept. Ultimately, researchers argued against using the word burnout as a general term (Maslach & Jackson, 1981; Cordes & Dougherty, 1993), believing that to do so minimized the importance of burnout's three subscales, each of which is now described.

Emotional exhaustion. Emotional exhaustion "is a clear signal of distress in emotionally demanding work" (Maslach et al., 1996, p. 20). Characteristics associated

with emotional exhaustion include feeling tired and listless (Maslach & Leiter) as well as restless and nervous (Farber, 1991). Emotionally exhausted workers feel emotionally drained and frustrated (Maslach & Jackson, 1981; Maslach et al., 1996) and are, therefore, psychologically unable to provide for their clients. Teachers suffering from burnout's emotional exhaustion are unable to "give of themselves to students as they once could" (Maslach et al., 1996, p. 28). "I have nothing left to give" (Farber, 1991, p. 73) reflects the tone of the teacher suffering from burnout's emotional exhaustion.

Depersonalization. Depersonalization, also referred to as cynicism (Maslach et al.), poses a serious problem within human service careers since it is marked by indifference toward both work and client. Workers suffering depersonalization feel callous and negative towards their clients and consequently treat them impersonally by distancing from them (Maslach et al., 2001). Characteristics associated with depersonalization include feeling cynical, cold, and distant (Maslach & Leiter, 1997). Relinquishing ideals and donning cynical indifference serves as a self-protecting mechanism (Maslach & Leiter, 1997). Anger associated with depersonalization is directed "at those perceived as having caused the problem – for example, unruly students" (p. 75). Teachers suffering from burnout's depersonalization and cynicism are found "tuning out students through psychological withdrawal" (p. 28). "I'd rather spend time doing paper work than interacting with students; most of the kids don't try, why should I?" (Farber, 1991, p. 82) reflects the tone of the teacher suffering from burnout's depersonalization.

Reduced personal accomplishment. Reduced personal accomplishment is the burnout symptom concerning workers who evaluate themselves negatively (Maslach et

al., 1996) especially regarding their work with clients (for teachers, students).

Characteristics of individuals suffering from reduced personal accomplishment include a general unhappiness and dissatisfaction with themselves, their professional abilities, and their effectiveness (Maslach & Jackson, 1981; Maslach et al., 1996; Maslach et al., 2001). Other characteristics include loss of confidence and a lost sense of adequacy (Maslach & Leiter, 1997). Teachers suffering from burnout's reduced personal accomplishment "no longer feel they are contributing to students' development. [Consequently] they are vulnerable to experiencing profound disappointment. . . . both severe and enduring" (Maslach et al., 1996, p. 28). "Ill try but it's a losing cause" (Farber, 1991, p. 82) reflects the tone of the teacher suffering from burnout's reduced personal accomplishment.

The review of burnout's symptoms concludes with information concerning whether the three subscales develop parallel to each other or sequentially (Cordes & Dougherty, 1993; Maslach et al., 2001). Schwab and Iwanicki (1982) believed burnout was not necessarily a process of one component leading to another. On the other hand, Lee and Ashford believed it was, to some degree, indeed, a sequential process. Shirom (1989) viewed burnout as a combination of physical fatigue, emotional exhaustion and cognitive weariness" (p. 589). Similarly, Koeske and Koeske (1989) proffered a different conceptualization of burnout whereby emotional exhaustion was "the essence" (132) and depersonalization and personal accomplishment related variables but not part of the burnout construct. By contrast, others (Maslach et al., 2001; Cordes & Dougherty, 1993) argued that to use exhaustion as a lone criterion was to lose sight of burnout as a multidimensional phenomenon altogether. Having reviewed literature concerning the

origins and nature of burnout as a syndrome consisting of three distinct subscales, Chapter 2 continues with a review of the *Maslach Burnout Inventory* (MBI).

Measuring Burnout

Burnout's shift from pop psychology (Maslach et al., 2001) to psychological syndrome involving three distinct dimensions occurred after years of research on human service workers that ultimately led to the development of the Maslach and Jackson (1981) MBI. The MBI is a widely accepted instrument (Bakker et al., 2002; Byrne, 1993; Cordes & Dougherty, 1993) with "the strongest psychometric properties" (Maslach et al., 2001, p. 401).

The MBI is considered the definitive measure of burnout, used by organizations and by researchers to assess how employees experience their work. It is a reliable questionnaire that provides a concise perspective on the energy, involvement, and effectiveness of staff members on the job. . . . A slightly modified Educators Survey focuses on the teaching profession. (Maslach & Leiter, 1997, p. 155)

Maslach and Jackson (1981), who developed the first (MBI) psychometric instrument to study burnout, the Human Services Survey, purported that burnout developed among those involved in "people-work" (p. 1). Others (Freudenberger, 1980; Cordes & Dougherty, 1993), however, identified burnout as a syndrome not only associated with human services but other jobs as well. Schwab (1983) agreed with Maslach and Jackson (1981), contending that burnout was indeed associated with human service workers whose daily interaction with people made them more susceptible. According to Maslach et al. (1996), recognition of the pervasiveness of burnout ultimately led to the development of the General Survey (MBI-GS), which is described in

the latest edition of the manual, along with the original Human Services Survey (MBI-HSS) and the Educators Survey. The Educators Survey, the MBI-ES, had been developed about ten years after the original Human Services Survey in response to the high interest in teacher burnout (Maslach et al, 1996), many having believed "the word 'teacher' modifie[d] the word 'burnout' all too well" (Farber, 1991, p. 3).

The section on burnout has thus far presented readers with an understanding of the origins of burnout. Although rooted in fiction (Greene, 1964) and assigned ill-conceived labels like *psychobabble* (Schwab, 1983), burnout ultimately emerged as a serious psychological syndrome due in part to the early works of Freudenberger (1974) and others (Gold, 1984; Farber, 1984; Maslach & Jackson, 1981; Maslach & Pines, 1977). The section also reviewed the debilitating symptoms of burnout's three dimensions, emotional exhaustion, depersonalization, and reduced personal accomplishment and described the MBI (Maslach et al., 1996) instruments, each developed to measure levels of burnout among human service workers (MBI-HSS and MBI-ES) or workers in general (MBI-GS). The MBI-ES, discussed fully in Chapter 3, was the instrument chosen for the study's measurement of reported levels of burnout among urban elementary school teachers. The burnout section continues with a review of teacher burnout intended to provide readers a deeper understanding of why burnout represents a crisis in today's No Child Left Behind school environment.

Teacher Burnout

The review of burnout relied on foundational and early studies on burnout as well as current research. The reliance on early studies is due, in part, because of a pervasive lack of recent research on burnout specific to public school teachers. In 2000,

Educational Leadership editor Scherer (2000) wrote that it was time to call burnout *passé* (p. 7). The results of database searches regarding teacher burnout lend support to Scherer's sentiments. As Table 2 and subsequent commentary suggest, teacher burnout has never drawn the investigative interest given the nursing field. However, its declining appeal, in the last five years is particularly noteworthy in light of the No Child Left Behind Act of 2001 (2002) and its mandated accountability demands on teachers.

Table 2

Search for Teacher-Related Burnout Studies

Keyword	October	Percent	October	Percent
	1980-2005		2000-2005	
Burnout	4813		1016	
Burnout <i>and not</i> nursing	4472	94	849	84
Burnout <i>and not</i> nursing <i>and</i> teacher	382	7	13	1
Stress	23,290		12,032	
Stress <i>and not</i> nursing	23,146	99	11,885	99
Stress <i>and not</i> nursing <i>and</i> teacher	136	6	73	6

Note. Source: EBSCOHost (2005).

Searching the ProQuest (2006) database for peer-reviewed journals revealed numbers proportionately similar to those listed in Table 2. A search of the last 25-years produced 5,764 hits on burnout and 307 on “burnout and not nursing.” The number of hits reduced to four upon adding “and teacher.” A search of the last five years produced the following numbers respectively: 185, 149, and one. Digital Dissertations (2006)

whose database begins with 1997 yielded a total of four studies, only one of which pertained to teacher burnout.

Replacing the keyword burnout with the keyword, stress yielded numbers proportionately similar to those listed in Table 2. A search of the ProQuest (2006) database of the last 25-years produced 23,390 hits on stress, 23,146 on “stress and not nursing.” The number of hits reduced to 136 upon adding “and teacher.” A search of the last five years produced the following numbers respectively: 23,851, 23,190, and 33. Digital Dissertations (2006) whose database begins with 1997 yielded a total of 371 studies, 55 of which related to “stress and not nursing.” None were found when adding “and teaching.” Studies related to teacher stress would not effectively capture the subscales of the burnout syndrome (Maslach & Jackson, 1981), as was verified in the section reviewing the symptoms of burnout. Therefore, the review relied on studies specific to teacher burnout.

In May 2006, a replication of keyword searches of EBSCOhost and ProQuest produced several additional studies (e.g., Bryant & Constantine, 2006; Kaufhold & Johnson, 2005; Linden et al., 2005; Roelofs et al., 2005) whose relevant findings were synthesized into the study where appropriate. Similar to previously conducted searches, results did not yield any studies addressing possible the relationship between No Child Left Behind testing mandates and teacher burnout.

The review of literature on burnout continues with consideration of burnout as it relates to teachers:

The teaching profession has been subject to increased pressure by society to expand their roles beyond education. Teachers are often expected to correct social

problems . . . , educate students in academic and skill areas, provide enrichment activities, meet the individual needs of students with a wide range of abilities, and encourage students' moral and ethical development Human and financial resources required to meet the diverse expectations have not been forthcoming.

(Maslach et al., 1996, pp. 27-28)

Increased pressures and expectations without commensurate resources suggest why teacher burnout is thought to involve a role conflict and ambiguity that job demands fail to ameliorate (Farber, 1984; Maslach et al., 1996). Researchers (Farber, 2000b; Gold, 1984; Inman et al., 2004) have noted further that accountability demands increase even as more and more teachers leave the profession (Darling-Hammond, 2003; Kenyeri, 2002; National Education Association, 2005; Weisberg & Sagie, 1999).

Not only do accountability demands influence teacher burnout but various demographic variables as well, with age representing the most consistent factor (Bakker et al., 2002). Findings have shown that younger versus older teachers suffered burnout symptoms more often (Farber, 1984; Maslach & Jackson, 1981; Gold, 1984). Studies on gender, however, are not as conclusive. Farber (1991) argued that research findings showed a larger number of male teachers suffered burnout when compared to female, while Bakker et al. (2002) argued the opposite. Friedman (1995) suggested burnout levels concerning gender were dependent upon other factors like student behavior.

Inattentiveness of students, for example, positively correlated to burnout in males, while disrespect positively correlated to burnout in females.

The next section, which continues the review of teacher burnout, includes reflective commentary on the six areas of job and person mismatch associated with

burnout newer theoretical framework. Suggested relationships between research findings and the six areas of mismatch are intended to enhance reader appreciation of why teacher burnout may exist in today's No Child Left Behind high-stakes testing workplace.

Six Areas of Organizational Life

Maslach et al. (2001) have identified six areas within the workplace that influence a worker's state of engagement or burnout on the burnout continuum (Maslach et al., 1996). The six areas related to workload, reward, community, fairness, values, and control represent the potential mismatch (Maslach & Leiter, 1997) that occurs between job and person when each area's opposite, lack of reward, for example, causes job engagement to erode to burnout. While an organization may find itself dealing with mismatches in only some of the six areas, research findings concerning the teacher's work environment suggest that each of the six mismatches may exist in the current teacher workplace, any one of which can "lead to burnout" (Maslach et al., 2001, p. 414).

Work overload, lack of control, and lack of fairness occur when accountability measures and organizational inequities overwhelm teachers, especially teachers whose skills or ideological principles do not match work demands (Farber, 1984; Fore, Martin, & Bender, 2002; Friedman, 1991; Friedman & Farber, 1992; Gold, 1981; Gold & Bachelor, 1988; Nummela, 1982; Taris et al., 2004). Work overload, lack of control, and lack of fairness occur, too, when school location, class size, student behavior, grade level, or subject area taught pose challenges to some but not all teachers (Abel & Sewell, 1999; Farber, 1984; Farber & Ascher, 1991; Friedman, 1995; Gold, 1985; Maslach & Pines, 1977; Whitman, Young, & Fisher, 1985). Lack of community occurs when teachers are so overloaded with work that they have little time to communicate with colleagues

(Ayres, Schalock, & Rudd, 2002; Pahnos, 1990; Starnaman, 1992). Lack of reward, extrinsic or intrinsic, and value conflict occur when teachers not only see the mismatch between their salaries and work demands (Friedman & Farber, 1992) but the mismatch between their self-concepts or professional ideologies and the demands and ideologies inherent in educational reform measures (Cherniss, 1997; Evers et al., 2002; Farber & Ascher, 1991; Friedman & Farber, 1992; Gold, 1981; Gold & Bachelor, 1988; Nummela, 1982; Pines & Maslach, 2002).

The literature review of burnout in general, and teacher burnout in particular, provided support for the quantitative cross-sectional study that sought to determine whether circumstances surrounding the mandate calling for 100% proficiency in mathematics and reading by 2014 (No Child Left Behind Act of 2001, 2002, § 1111) has created a crisis in public education that warranted the current study on teacher burnout. The review of burnout concludes with consideration of why a study on teacher burnout was appropriate.

Why Teacher Burnout Matters

Maslach and Leiter (1997) have argued:

High quality work requires time and effort, commitment and creativity, but the burned-out individual is no longer willing to give these freely. The drop in quality and quantity of work produced is the occupational bottom line of burnout. (p. 19)

The research postulated that should teachers be the burned-out individuals Maslach and Leiter described, they may not be able to satisfy the No Child Left Behind mandate for 100% of the nation's youth to be proficient in mathematics and reading by 2014. The Linden et al. (2005) study illustrated that some teachers with high levels of burnout

continue to teach, cause for concern when aligned with the danger of ignoring burned-out teachers proffered by Hughes (2001): “Only by aggressively intervening in the burnout process is it possible to prevent the potential negative impact of burnout on both the teacher *and* [italics added] the educational process” (p. 297).

Many researchers (Cordes & Dougherty, 1993; Evers et al., 2002; Gold, 1984; Maslach et al., 2001; Schwarzer, Schmitz, Gerdamarie, & Tang, 2000; Taris et al., 2004) have concurred with Hughes’ (2001) premise and its significance. When burnout interferes with teachers’ cognitive processes (Farber, 1991); when burnout causes feelings of helplessness and hopelessness (Gold, 1984); when burnout causes, rather than physical, psychological withdrawal (Taris et al., 2004) and attitudinal shifts from care to indifference (Maslach & Jackson, 1981; Maslach et al., 1996), teacher burnout creates a crisis in education (Farber, 1981; Maslach et al., 1996). As Farber (1991) has argued, when burnout affects even small numbers of teachers, it compromises and threatens schools and their goals.

Public school teachers are presently facing formidable accountability demands and pressures (Bracey & Molnar, 2003; Goldstein & Noguera, 2006; Inman & Marlow, 2004; Kohn, 2005; Noddings, 2005), a situation suggesting that now is not the time to declare burnout passé, which Scherer (2000) had suggested before the enactment of No Child Left Behind legislation. Today’s No Child Left Behind teacher workplace warranted a quantitative study that examined teacher burnout in relation to the legislation’s high-stakes testing variables, subject area taught, grade level taught, and report card label earned. The study helped fill the gap existing in current research that had focused on variables related to teacher preparation programs (Ayers et al., 2002; Gold &

Bachelor, 1988); student behavior (Friedman, 1995; Whiteman et al., 1985); special education (Fore et al., 2002); age, gender (Farber, 1984; Gold, 1985), and work location (Abel & Sewell, 1999; Farber, 1984; Farber & Ascher, 1991).

The quantitative cross-sectional study on burnout was particularly relevant to issues raised in the *MBI Manual* (Maslach et al., 1996):

A detrimental impact on the quality of the service relations has been a fundamental assumption in the idea of burnout (Cherniss, 1980; Maslach, 1982b, 1993) (as cited in Maslach et al., 1996, p. 39). Empirical evidence of this effect would provide needed confirmation of the burnout concept. . . . It may be that these questions will be more readily researched in teaching because teachers provide service in a more public setting. . . . Research on this question requires information from. . . the organization's existing performance appraisal systems. (p. 39)

A viable performance appraisal system became public domain due to the No Child Left Behind Act of 2001 (2002) legislation mandating the public reporting of district and school report cards (§ 1225). By examining reported burnout levels among teachers in schools failing, or successfully meeting, adequate yearly progress goals (improvement versus adequate progress schools respectively), the study had the potential to provide the confirmatory information about burnout's impact on service quality sought by researchers such as Maslach et al. (1996). The third research question sought to address whether teachers in improvement schools reported greater levels of burnout (in its three dimensions) than teachers in schools achieving adequate progress. If they were,

the teachers at improvement schools could very well be imposing a detrimental impact on their students.

Conclusion

The section on burnout examined burnout in general and teacher burnout in particular. It reviewed burnout's origins, its multidimensional symptoms of emotional exhaustion, depersonalization, and reduced personal accomplishment, and its various measurement instruments including the MBI-ES. The review discussed findings from teacher burnout studies in relation to the logically-implied corresponding areas of job and person mismatch: work overload, lack of reward, lack of control, lack of community, lack of fairness, and value conflict. The six areas were included in the discussion to enhance reader awareness of the teacher work environment as it relates to the six workplace mismatches that "lead to burnout" (Maslach et al., 2001, p. 414) and to support the new study on teacher burnout in relation to the demanding No Child Left Behind workplace. The next section reviews the teacher work environment in relation to No Child Left Behind accountability with specific attention to its high-stakes testing mandates.

No Child Left Behind Accountability

Having discussed the dependent variable burnout and its relevancy to the quantitative cross-sectional study, this next section provides a comprehensive review concerning the independent variable subject area taught and its mediating variables, grade level taught and report card label earned. To do so, this section includes the following: (a) the origins of public education's new accountability system, the No Child Left Behind Act of 2001; (b) the legislation's objectives pertaining to high-stakes testing (c) opposing viewpoints concerning No Child Left Behind's accountability and high-stakes testing precepts; (d) research findings related to teachers and high-stakes testing accountability

demands; and (e) enumeration of why the review of details related to No Child Left Behind high-stakes testing legislation justifies the quantitative cross-sectional study that sought to examine the relationship between teacher burnout and No Child Left Behind's subject area taught, grade level taught, and report card label earned.

As with the section on the dependent variable, burnout, the section on federal legislation was framed around a central issue, namely, whether the No Child Left Behind Act of 2001 (2002) mandate calling for 100% proficiency in mathematics and reading by 2014 (§ 1111) has created a crisis of burnout in public education that warranted a new study. The new study sought to determine if teachers responsible for satisfying high-stakes (Gunzenhauser, 2003) testing requirements who are reportedly suffering from stress and lowered morale (Center on Education Policy, 2006; Sunderman et al., 2004; Taylor et al., 2003), were, in fact, suffering the debilitating symptoms (Evers et al., 2002; Farber & Ascher, 1991; Hughes, 2001; Linden et al., 2005; Maslach & Jackson, 1981; Maslach et al., 2001) of teacher burnout.

A reiteration of Gunzenhauser's (2003) operational definition for the term high-stakes testing is presented here to assist the readers' understanding of the term used throughout this section:

'High-stakes testing' refers to the use of standardized testing measures as criteria for determining the quality of schools, promotion of children to the next grade, high school graduation, teacher bonuses, or the governance of a school. High-stakes testing is a method associated with the school accountability movement, which in turn is connected with the standards movement, a related development that has brought together various people who wish to maintain high standards for

school curricula and high expectations for the performance of all students. The No Child Left Behind . . . Act of 2001 expands the role of high-stakes testing by legislating their incorporation in states' school accountability programs. (p. 53)

The origins of No Child Left Behind Act of 2001(2002) and its high-stakes accountability mandates are now reviewed.

Origins of No Child Left Behind Accountability

Although *A Nation at Risk* (1983) has been called the genesis of No Child Left Behind accountability (Brady, 2003), accountability in public education has actually spanned centuries. The early colonial period had envisioned an education system accountable to produce a literate citizenry (Tozer, Violas, & Senese, 2002), but by the late 19th century, public schools were expected to do much more than transform masses of immigrants into literate citizens. They were expected to educate them to become literate citizens who were also capable of contributing to the country's social and economic stability. During this time, accountability demands were locally monitored (Pai & Adler, 2001; Tozer et al., 2002), and teachers were essentially role models accountable to local school communities. Those communities served as

sentinels stationed at the door of every schoolhouse in the State, to see that no teacher ever crosses its threshold, who is not clothed, from the crown of his head to the sole of his foot, in garments of virtue” (Mann as cited in Tozer et al., p. 67).

Early America's accountability demands on teachers evolved from expectations of virtue to the progressive movement's expectation and goal of efficiency (Eisner, 2005; deMarris & LeCompte, 1999; Short & Greer, 2002). By the 20th century, accountability demands had expanded beyond the expectations and goals of an efficient society whose

public education system provided equal opportunity for all (Tozer et al., 2002). Besides equality, new demands relating to safety and economics goals emerged and continued into the 21st century. Several timely events punctuated and upheld the importance of each goal, advancing the notion of public school accountability that ultimately led to the No Child Left Behind Act of 2001. Summaries of the timely events pertaining to equality, safety, and economics are now presented.

Equality

Brown v. Board of Education (1954) adjudicated on behalf of equal opportunity and education for all when it ruled against the 60 year-old *Plessy v. Ferguson*'s "separate but equal" (Tozer et al., 2002, p. 237) precedent. Called the "catalyst for the expanding civil rights movement" (U.S. National Archives, 2004, ¶ 1), *Brown v. Board*'s landmark decision demonstrated the federal government's willingness to wield its authority in order to champion a public education system that would provide equal opportunity for all children, majority, and minority alike. A decade later, federal authority again acted on behalf of equality in public education when the Elementary and Secondary Education Act (ESEA) (1964) ensured federal funds on behalf of the nation's poor as well as minority children. *Brown v. Board*'s ruling and ESEA funding both served to benefit minority children and impoverished children suffering from the achievement gap, "performance differentials among the various racial/ethnic [and income] groups" (Popham, 2004, p. 46). The ideals and goals of *Brown v. Board* and ESEA were validated and extended when Congress passed the reauthorization of the ESEA (1964) legislation known by decree as the No Child Left Behind Act of 2001 (2002, Introduction).

Safety

In 1957, the launching of Sputnik amplified the threat of Communism and prompted a focus on education that blamed deficiencies in America's schools for the country's loss of technological superiority (Amrein & Berliner, 2002; Bracey, 2006; Pai & Adler, 2001; Tozer et al., 2002). Although Sputnik's launch had not placed America in any imminent danger, the public's perception was, nonetheless, that America's schools had endangered the nation by failing to "teach science and mathematics to an entire generation of students" (Tozer et al., p. 231). Once again, the federal government responded to the public's dissatisfaction with its schools, this time enacting the National Defense Education Act of 1958, which provided millions of dollars to improve mathematics and science instruction.

Economics

The report, *A Nation at Risk* (National Commission, 1983), extended accountability beyond themes of equality and safety to economic stability and superiority (Pai & Adler, 2001; Tozer et al., 2002). These new themes resounded in the section entitled *The Risk* (National Commission, 1983):

If only to keep and improve on the slim competitive edge we still retain in the world markets we must dedicate ourselves to the reform of our educational system for the benefit of all -- old and young alike, affluent and poor, majority and minority. (¶ 2)

With the 1983 call for an "urgent need for improvement" (National Commission, 1983, Recommendations) came a new layer of public dissatisfaction. The public now demanded teachers who were held accountable to a back to basics (Smith, 1986, p. 91) approach

rather than a child-centered (Dewey, 1938/1997) approach. Importantly, the public also wanted what the National Commission's (1983) report had recommended, standards and standardized testing at specific grade levels:

Standardized tests of achievement (not to be confused with aptitude tests) should be administered at major transition points from one level of schooling to another. . . . The tests should be administered as part of a nationwide (but not federal) system of State and local standardized tests. . . . to evaluate [student] progress.
(Recommendation B, Statement 3)

The bipartisan call for accountability through high standards and high-stakes testing generated in part by *A Nation at Risk* continued for two decades (Amrein & Berliner, 2002) in which many states complied with the recommendations of *America 2000* (U.S. Department of Education, 1991-1993), the reform movement initiated by former President Bush and augmented by former President Clinton's Goals 2000 (1996) legislation (Tozer et al., 2002). Among the newer legislation's goals (Goals 2000, 1996) were two that resonated with No Child Left Behind's emphasis on the subjects of mathematics and reading. Goal 4 envisioned American students securing worldwide superiority in mathematics (and science) achievement by the year 2000. Goal 5 envisioned a nation whose entire population would be literate by the year 2000. What the reform measures of the latter part of the 20th century could not accomplish through voluntary calls for standards and standardized testing was indeed accomplished by the 21st century's mandated accountability movement launched by the No Child Left Behind Act of 2001.

The next section reviews No Child Left Behind mandates relevant to the quantitative cross-sectional study. The review relies exclusively on federal and state source material to avoid misrepresenting important material with the interpretations of others as recommended by Cooper & Schindler (2002). The purpose of the review of No Child Left Behind legislation is to foster an understanding of the legislation that will help readers appreciate the importance of the current study that examined teacher burnout as manifested by emotional exhaustion, depersonalization, and reduced personal accomplishment in relation to No Child Left Behind's high-stakes subject areas, grade levels, and report card labels.

Multifaceted Legislation

According to former Secretary of Education Paige (2003), "For the first time in the history of our nation, every state in our nation has an accountability plan that holds all schools and all students in their state to high standards" (§ 1). Paige's statement is rooted in the former secretary's knowledge of key mandates found within the legislations. Excerpts from four of twelve objectives in the legislation's purpose statement are presented here for their relevancy to the study (with original quotations marks maintained):

“The purpose of this title is to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at a minimum, proficiency on challenging State academic achievement standards and state academic assessments. This purpose can be accomplished by

“(1) ensuring that high-quality academic assessments [and] accountability systems are aligned with challenging State academic standards so that students, teachers, parents, and administrators can measure progress . . . ;

“(2) meeting the educational needs of low-achieving children in our Nation's highest-poverty schools, limited English proficient children;

“(3) closing the achievement gap between high- and low-performing children, especially the achievement gaps between minority and nonminority students, and between disadvantaged children and their more advantaged peers;

“(4) holding schools, local educational agencies [districts], and States accountable for improving the academic achievement of all students, and identifying and turning around low-performing schools that have failed to provide a high-quality education to their students. . . .” (§1001 (1)–(4))

The previous sections reviewed the origins of accountability and presented salient excerpts from No Child Left Behind legislation. The next section reviews the legislation relevant to what the study defined as high-stakes testing variables. The independent variable was subject area. The mediating variables were grade level taught and school report card label.

High-Stakes Testing

Reminiscent of the goals recommended by Goals 2000 (1996), which emphasized mathematics and reading, is the No Child Left Behind Act of 2001 (2002) mandate calling for 100% proficiency in mathematics and reading by 2014 (§ 1111). The mandate has essentially transformed the two subjects into high-stakes subject areas. (To illustrate the meaning of the study's use of the term high-stakes subject area, science will become a

high-stakes subject area when it too becomes a mandated testing subject beginning with the 2007-2008 school year.)

To monitor student progress towards the 100% proficiency goal, federal mandates include specific reporting requirements that are explained in a federally drafted guide (Department of Education, Office of the Secretary, 2003):

Each state begins by setting a “starting point” that is based on the performance of its lowest-achieving demographic group or of its lowest-achieving schools in the state - whichever is higher. The state then sets the bar -- or level of achievement -- that a school must attain after two years in order to continue to show adequate yearly progress. Subsequent thresholds must be raised at least once every three years, until at the end of 12 years [2014], all students in the state are achieving at the proficient level on state assessments in reading/language arts and math. (p. 8)

Federally mandated reporting (No Child Left Behind Act of 2001, 2002) systems inform the public whether schools have made (and earned the label denoting) adequate progress. Arizona's plan, AZ Learns (Arizona Department of Education, 2003), assesses grades 3, 5, 8, and 10 to fulfill federally mandated annual yearly progress assessments. Schools whose students fail to reach their adequate yearly progress goals are identified as schools in need of improvement (No Child Left Behind Act of 2001, 2002, § 1116).

Consequences of Success and Failure

The federal legislation calls for "rewards, such as bonuses and recognition, [which] the State will use [and fund] to hold local educational agencies [school districts] and public elementary schools and secondary schools accountable for student

achievement and for ensuring that they make adequate yearly progress" (No Child Left Behind Act of 2001, 2002, § 1111).

Should schools fail to meet annual yearly progress they become improvement schools that face corrective and restructuring actions dependent upon the number of years they remain in improvement status defined in a federally prepared guide (U.S. Department of Education, 2003) as follows:

1. A Title I school that has not made adequate yearly progress, as defined by the state, for two consecutive school years will be identified by the district before the beginning of the next school year as *needing improvement* [original italics]. . . .
2. If the school does not make adequate yearly progress for three years, . . . students from low-income families are eligible to receive supplemental educational services, such as tutoring or remedial classes, . . .
3. If the school fails to make adequate yearly progress for four years, the district must implement certain *corrective actions* [original italics] to improve the school, such as replacing certain staff
4. If a school fails to make adequate yearly progress for a fifth year, the school district must initiate plans for restructuring the school. This may include reopening the school as a charter, replacing all or most of the school staff. (p. 9)

No Child Left Behind's explicit consequences justified the decision to identify test-reporting grade levels as high-stakes grades. It is the students, and importantly, the teachers in grades 3, 5, 8, and 10 whose success or failure related to high-stakes test

results in mathematics and reading help determine each school's label. Further, it is the failing performance that occurs within these high-stakes grades that can ultimately lead to the replacement of all staff members (U.S. Department of Education, 2003). Regardless of the subject area taught, job security of all teachers can depend on whether the teachers assigned to high-stakes grades successfully move their students towards identified adequate yearly progress goals.

The No Child Left Behind legislative mandates and formidable consequences discussed in this section were selected for their relevance to the quantitative cross-sectional study, which sought to learn whether stress-filled legislated workload demands (Bracey & Molnar, 2003; Center on Education Policy, 2006; Kohn, 2005) have precipitated an environmental workplace primed for teacher burnout. The next section provides additional justification for the study by reviewing opposing viewpoints on No Child Left Behind testing mandates, specifically those concerning the high-stakes variables of subject area, grade level taught, report card label earned.

Opposing Viewpoints on No Child Left Behind's Testing Mandates

Bloomfield and Cooper (2003) have stated that opposing viewpoints concerning No Child Left Behind legislation revolve around the question of whether federal regulations and consequences for high-stakes testing will hurt or help public education (§ 1). They noted that some opponents see the legislation as federal control over local districts (§ 4). Disagreeing, however, is the legislation itself (No Child Left Behind Act of 2001, 2002), self-described as an act "to close the achievement gap with accountability, flexibility and choice" (Introductory statement). In fact, former Secretary

of Education Paige (U.S. Department of Education, 2003) has referred to the legislation's flexibility as one of its "cornerstones" (p. iii).

Challenging the notion of the legislation's flexibility is Orlich (2004) who criticizes flexibility that allows each state to devise its own definition of proficiency and to develop its own high-stakes tests. Orlich contends that labeling schools as needing improvement should their students fail to demonstrate proficiency according to specified timelines is "a flexible way of saying 'failing'" (p. 8). Sunderman and Orfield (2006) as well as the National Conference of State Legislators (2005) have revealed problematic flexibility that involves the federal government's failure to develop and implement uniform criteria by which states apply for waiver applications (regarding legislative statutes), instead, rendering decisions on change requests on a state-by-state basis.

Another challenge to the notion of flexibility comes from a national organization for educators, the Association for Supervision and Curriculum Development (ASCD). The Public Information Director for ASCD (Gleason, 2004) reported on the organization's adoption of two positions related to No Child Left Behind legislation. One of the ASCD's positions agreed that the achievement gap must be recognized, addressed, and closed. However, the other position challenged the legislation for its lack of flexibility regarding approaches to assessment: "Using a single achievement test to sanction students, educators, schools, districts, states/provinces, or countries is an inappropriate use of assessment" (§ 1).

For many, support for high-stakes testing and ensuing rewards and sanctions is rooted in beliefs that the achievement gap has lasted too long (Hess, 2003; Mitchell, 2004; Paige, 2003). Reminiscent of concerns raised by *A Nation at Risk* (National

Commission, 1983), former Secretary of Transportation and attorney for the Mexican-American Legal Defense & Education Fund (“Denver’s Characters,” 2004) Federico Peña (as cited in Mitchell, 2004) raised the argument that the achievement gap poses a threat to the nation's security and economic stability: “What has happened to millions of Latino children . . . [original ellipses] has created a crisis in the national security of our country [whereby] the U.S. is losing its competitive edge” (§ 1, ¶¶ 4 - 5). In a speech presented by Paige (2003), a sense of crisis similarly resounded:

Our citizens pay a huge economic and social price for under-educated citizens. Welfare rates rise. Poverty increases. Health status diminishes. Tax money is spent to care for those who cannot care for themselves. We find greater strains on Social Security and Medicare and Medicaid. Prices increase to cover rising costs of insurance, job re-training, job-related accidents, disability, and poor productivity. Under-employment becomes larger if workers can't hold fulltime jobs. Violence, crime, substandard housing, hunger, and disintegration of the family are all linked to low educational attainment. (¶¶ 42-43)

Opponents like demographer Hodgkinson (2003) have countered such arguments noting that education cannot solve the economic and social price referenced by Paige (2003). Hodgkinson (2003) has contended that the problems begin before school, at birth with infant and child mortality, poverty, and “children born to mothers using tobacco, alcohol, or drugs; and children born into lives of neglect or abuse” (p.6). For Hodgkinson, a nation at risk also involves the problematic child care environments in which millions of the nation’s pre-school children are placed: “There is no quality control for child care.

. . . No other developed nation would allow such an uneven hodgepodge of programs for children birth to age five. The nation *truly* is at risk” (p. 5).

The ASCD (Gleason, 2004) has shared Hodgkinson’s sentiments arguing that to leave no child behind requires family and community resources and programs that address the roots of poverty and the achievement gap. Resources and programs require funding, another issue provoking opposing viewpoints. The Association of Community Organizations for Reform Now (ACORN) (“Leaving Teachers,” 2003), a national parent and community organization, has expressed belief in federal goals to close the achievement gap. Nonetheless, ACORN has argued that No Child Left Behind legislation cannot provide solutions to avert the education crises without full funding.

Similar demands for full-funding have been expressed by the bipartisan National Conference of State Legislators (2005) and the National Education Association (NEA) whose president (Weaver, 2003) has argued that the association “will not stand by while teachers, education support professionals, and America’s children are hurt by the rhetoric of reform” (p. 5). Backing its strong position, in 2005 the NEA added its moniker and money to *Pontiac v. Spellings* (2005), the 2005 lawsuit filed against current Secretary of Education Spellings on behalf of association districts throughout the country. The NEA

ask[ed] the courts to recognize that the . . . [legislation] requires the federal government to pay for billions of dollars . . . to prevent taxpayers . . . from being forced to shoulder the burden of these regulations at the expense of proven classroom programs for their children. (National Educators Association, 2005, ¶ 1)

Aspey (2005), the U.S. Department of Education press secretary called the NEA's legal action regrettable (§ 1), noting that the federal funding increases had represented historic proportions and calling the NEA's argument weak (§ 2). Secretary Paige (2003), who preceded Spelling, also defended the level of federal funding though another former Secretary of Education, Riley (2002) has argued, like ACORN and NEA, that full funding is essential. In November 2006, a federal court judge dismissed the *Pontiac* lawsuit (*Pontiac v. Spellings*, 2005). NEA filed an appeal (*Pontiac v. Secretary*, 2006), which has garnered support in the form of "amicus 'friends of the court' briefs" (National Education Association, 2006, § 7) from a number of states, for example, Pennsylvania (*Pontiac v. Secretary*, 2006, amicae curiae) and a cohort of states that include Connecticut, Delaware, Illinois, Maine, Oklahoma, Wisconsin, and the District of Columbia (*Pontiac v. Secretary*, 2006, amici curiae).

Opposing viewpoints concerning full funding often involve the No Child Left Behind mandate for highly qualified teachers. Proponent Walsh (2001) believes that schools committed to active recruitment of "the best and the brightest" (Finn & Kanstoroom, 2000, §2) will ensure success for all students. While ACORN (2003) has agreed with the need for highly qualified teachers, it has argued that failure to fund No Child Left Behind mandates perpetuates the critical qualified teacher shortage especially in low socioeconomic areas. Hess (2004) has argued that more funding is not the answer to securing qualified teachers but rather better management of funds that could be allocated to "relentlessly seek out talented and entrepreneurial teachers" (§ 5, § 4).

Opposing the argument favoring better management over increased funding (Hess, 2004; Walsh, 2001) are opponents (Berliner & Biddle 1995; Bracey & Molnar,

2003; Darling-Hammond, 2003, who maintain that more money is indeed a factor in securing talented individuals into the teaching profession where salaries remain lower than other professions. In 1992, Marchese (1992) argued that public education had been failing to secure the best and the brightest (Conclusion) for years. More than 20 years later, Darling-Hammond (2003) argued the situation had worsened, with more teachers leaving the profession than entering, and one-third who do enter leaving within five years, with even worse statistics affecting low socioeconomic schools.

Controversies over full funding notwithstanding, there are those who support or oppose No Child Left Behind legislation for its basis tenets. Brown (2002) and Hess (2004) have expressed sentiments similar to those of one school superintendent who declared, "It's about time something has been done'" (Montoya as cited in Mitchell, 2004, § 1, conclusion). By contrast, opponents (Barton, 2006; Eisner, 2005; Harvey, 2003; Noddings, 2005; Orlich, 2004; Weaver, 2003) have expressed sentiments similar to those of former Secretary of Education Riley (2002) who has argued: "If we create an accountability system that is more punitive than diagnostic, . . . we will have missed the mark entirely. . . . To raise standards, states should not rely on a single high-stakes test" (§ 2, conclusion).

Opposing viewpoints on the federal high-stakes testing mandates find proponents (Brown, 2002; Hess, 2003; Hess, 2004; Finn, 2002; Finn & Kanstoroom, 2000) of No Child Left Behind supporting the premise that high standards measured through testing will help narrow the achievement gap. Brown (2002) has argued that resultant testing data provide the public important information about the status of student achievement. Brown has further supported No Child Left Behind's 100% proficiency in mathematics

and reading mandate, contending: "If you don't know where you want to go, how can you ever get there?" (p. 5).

Opponents (Abrams & Madaus, 2003; Berube, 2004; Sergiovanni, 2000) have argued that it is not the standards that are suspect and problematic but their assessment through high-stakes testing. Some (Berube, 2004; Thomas, 2001) have argued that high-stakes tests cause teachers to forego normally higher-level teaching practices in favor of *teaching to the test* practices. Proponents of No Child Left Behind high-stakes testing like former Secretary Paige (2003) have addressed this concern, noting "there is nothing wrong with 'teaching to the test,' if you are testing something that students need to learn" (Conclusion). However, Ravitch (2003), a supporter of standards and their assessment through testing, has criticized high-stakes tests nonetheless, arguing that the rigor of standardized tests has been lost to an "overloaded social agenda [that] helps to explain why so many standardized tests today probe little more than basic skills" (p. 60). Opponents to standardized testing have also questioned the test scores' reliability (Gunzenhauser, 2003) as well as their arbitrary and sometimes unreasonable pass scores (Sergiovanni, 2000).

Regarding the concept of report card labels, Hess (2003) has expressed support for "mean accountability . . . [that] uses coercive measures—incentives and sanctions—to ensure that educators teach and students master specified content" (pp. 22-23). Like Paige (2003), Hess (2004) has contended that public education has settled too long for its failure to close the gap:

Results are troubling enough [but], those for minority populations and urban school systems are horrifying. 60 percent of black fourth-graders and 56 percent

of Hispanic fourth-graders failed to demonstrate even 'basic' reading skills, while 46 percent of black fourth-graders and 38 percent of Hispanic fourth-graders failed to show mastery of even 'basic' math skills. (§ 2, ¶ 1)

In opposition to Hess's argument are Wiley, Mathis, & Garcia (2005) whose research has projected that 85% of the Great Lake states will fail to reach adequate progress by 2014. Wiley et al. believe the achievement gap cannot be closed until its underlying social problems are resolved.

Under the aegis of the No Child Left Behind Act of 2001 (2002) legislation, the parents refusing to accept failure any longer have the right to remove their children from poorly performing (improvement) schools (§ 1112) and into schools that have achieved adequate progress. Such parents have the support of No Child Left Behind proponents like Bolick (2003), who believe that parents indeed have the right to choose "where and how their children are educated" (p. 32). *In No Child Left Behind: A Parent's Guide* (U.S. Department of Education, 2003), parents are told: "In this new era of education, children will no longer be trapped in the dead end of low-performing schools" (p. 2).

Elmore (2003) and Saporito (2003) have shown that consequences related to school transfers related to choice include the exacerbation of poor conditions already existing in schools failing to achieve adequate yearly progress. Importantly, Brady (2003) noted that while students may exit low-performing schools, deemed in a federal publication "the dead end" (U.S. Department of Education, 2003, p. 2), the teachers remaining in such schools unfortunately still face the challenge of "not knowing how to improve" (Brady, 2003, p. 9).

Concluding Viewpoint

Finneran (2002-2003) has criticized the controversy surrounding No Child Left Behind's high-stakes testing, not because the controversy exists, but because it diverts attention from important talking points about

whether the standards of performance are fair and reasonable, whether the test is aligned with the curriculum, whether test results are being considered in context with other indicators of student achievement, whether test results are being properly interpreted and used for the purposes for which they were designed, and whether testing is being used for its ultimate purpose: to gain a better understanding of how well young people are learning and to gain insights into what can be done to enhance their education. (p. 42)

An important talking point absent from Finneran's list and fully discussed in the next section, is whether teachers currently implementing No Child Left Behind high-stakes testing mandates are emotionally and psychologically able, or disabled, by burnout's debilitating symptoms of emotional exhaustion, depersonalization, and reduced personal accomplishment.

The High-Stakes Testing Workplace

Findings from numerous studies (Abrams et al., 2003; Bracey & Molnar, 2003; Clarke, Shore, Rhoades, Abrams, Mathison & Freeman, 2003; Miao, & Li, 2003; Inman & Marlow, 2004; Moon et al., 2003; Pedulla et al., 2003; Perreault, 2000; Rhodes, Nevill, & Allan, 2004; Sanders, 1999; Taylor et al., 2003) have suggested that test-related reform measures like those of No Child Left Behind legislation have increased workload demands and stress levels among teachers. Among the factors producing the reported

increases in stress levels is the altering of teaching practices to implement subject-specific testing practices that teachers do not necessarily support. Maslach and Leiter (1997) have argued that such value conflicts, those mismatches “between the requirements of the job and our personal principles” (p. 16) affect each of the three dimensions of burnout: emotional exhaustion, cynicism or depersonalization, and inefficacy.

Findings from studies (Abrams et al., 2003; Clarke et al., 2003; Moon et al., 2003; Pedulla et al., 2003; Taylor et al., 2003) have suggested that teachers who altered their teaching practices reported feeling high levels of stress. Further, increased stress and lowered morale were found to be higher in lower achieving schools (Perreault, 2000). Notwithstanding, no studies have been located that investigated whether reported stress (whether related to altered teacher practices or not) is, in actuality, the unmediated stress of teacher burnout. The study helped fill this gap and add to the existing body of literature by determining whether the subject area and grade level taught as well as the report card label earned influence reported burnout levels among elementary school teachers working under No Child Left Behind accountability demands. The study helped determine whether No Child Left Behind legislation was helping to close the achievement gap, or, in fact, widening the gap by its very measures to close it.

The Sunderman et al. study (2004) surveyed elementary and middle school teachers in two large urban districts that service minority and disadvantaged (eligible for free and reduced lunch) populations. The study surveyed 1,445 teachers and had a 77.4% response rate. Most of those who responded were elementary school teachers. Findings showed that a significant number of teachers reported feeling unfairly rewarded and

punished by No Child Left Behind sanctions related to the failure to achieve adequate progress:

Teachers in low-performing schools work harder than the government can imagine! We are blamed for everything that causes a child to fail, . . . [original ellipsis]

Low performing schools make progress, and yet nothing is good enough. When we say that we deal with absenteeism, verbal student abuse, etc., we are told these are excuses . . . [original ellipses]

We are dedicated people who have been treated unfairly. (p. 9)

While findings from the Sunderman et al. (2004) study suggested that teachers associated report card labels with feelings of unfairness, the findings did not reveal whether teacher perceptions of unfairness reflected the emotional exhaustion and depersonalization that can result from the lack of fairness (Maslach et al., 2001). This gap in research was filled, in part, by the quantitative cross-sectional study that ascertained whether reported levels of burnout in its three subscales differed according to whether teachers worked in schools that have achieved the desirable adequate progress versus the improvement label.

The review of high-stakes testing and accountability continues and now includes reflective commentary on the six areas of job and person mismatch in a manner similarly used in the review of teacher burnout. For example, findings from the Woody et al. (2004) study suggest lack of control and value conflict, both of which can lead to burnout's depersonalization (Maslach & Leiter, 1997): “The [accountability] system is indeed influencing teachers’ work in elementary school classrooms, . . . producing

unintended or potentially negative consequences. . . . causing teachers to feel they have less control over classroom decisions and diminished satisfaction with their work” (p. 8). Findings from the Nathan (2002) study, which examined the consequences of curricular decisions made to increase student test scores, likewise suggest lack of control and value conflict. While acknowledging improved test scores, teachers regretted the curricular opportunities lost when funds were transferred from one department to another: “There is no contest between math and music: math must win” (§ 5, ¶ 3). Reflective commentary is included in the review to, once again, enhance reader appreciation of why a study concerning the No Child Left Behind workplace in relation to teacher burnout was necessary.

High-Stakes Subject Areas

Findings from Taylor et al. study (2003) suggest that work overload, lack of fairness, and lack of community pervade the teacher workplace now that the stakes have been raised for some but not all subject areas, specifically mathematics and reading. The Taylor et al. study found teachers reporting that the pressure from testing “definitely” (p. 26) decreased teacher morale. The study reported that rather than help improve classroom instruction, testing had provoked one teacher to change assignments from a high-stakes to a low-stakes subject area: “My students always did well . . . but when there was so much pressure and more stress on how we would do as a school, I decided to teach art” (p. 26).

The statement from the Taylor et al. (2004) study illustrates a situation whereby a high-stakes subject area teacher actually changed teaching assignments to teach a different, low-stakes subject area, art. The research sought to investigate whether high-stakes subject area teachers (remaining in their high-stakes subject area assignments)

were experiencing increased stress that may be, in fact, the unmediated stress (Friedman, 1995) of burnout. The cross-sectional study helped fill the gap in research by investigating whether No Child Left Behind's high-stakes subject areas of mathematics and reading have created an environment that positively influences teacher burnout.

High-Stakes Grade Levels

Findings from the Clarke et al. (2003) study have illustrated the value conflict teachers experience when assigned to teach high-stakes grade levels, where publicly reported test scores carry more (accountability) weight than other grade levels: "The relationship between stakes and impact on classroom practice is mediated by several factors, including . . . whether they teach a tested or non-tested grade or subject area" (p. 91). Similar findings (Abrams et al., 2003; Boaler, 2003; Moon et al., 2003; Stecher & Barron, 2001; Sunderman et al., 2004; Taylor et al., 2003) have suggested that teachers may be struggling with the value conflict that can occur when compromising one's beliefs. It remained unclear whether the pressures and stress brought about by value conflict's emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Leiter, 1997; Maslach et al., 2001) were, in actuality, symptomatic of teacher burnout. The cross-sectional study on burnout helped fill the gap in research by investigating whether reported levels of teacher burnout were influenced by No Child Left Behind's high-stakes subject areas and grade levels.

High-Stakes Report Card Labels

Findings from the Taylor et al. (2003) study illustrate the need to study teacher burnout in relation to the mediating variable of report card labels, which teachers believe to be unfair, demoralizing, and detrimental:

'We can't even get teachers to come into schools like the one I am in because they are afraid that they will be called failing. Why should a young teacher come here when they can go to a wealthy school district? I mean the stigma that the grading has put on all schools in minority neighborhoods is just absolutely incredible. The talk that the good teachers don't come here, it basically frightens away anybody with any ability who doesn't know the community. Why should they come somewhere when they are going to be called a failure? I can't blame those teachers.' (p. 49)

Questions left unanswered by extant research findings such as those of Taylor et al. (2003) illustrated a gap in research concerning No Child Left Behind labels and the lack of fairness (Maslach & Leiter, 1997; Maslach et al., 2001) inherent in the burnout work environment.

In another study, Boaler (2003) described the frustration and lowered morale of teachers whose English language learning students did well on school achievement tests in mathematics but failed high-stakes state assessment tests because of barriers of language context rather than computation ability. It is unclear whether reduced personal accomplishment influences lowered morale reported by teachers in schools that earn failing labels because of the inadequacy of testing instruments rather than ability. The cross-sectional study on burnout sought to fill the gap in research by investigating the extent to which reported burnout levels among high-stakes and low-stakes subject area teachers was further influenced by the federal labels (improvement or adequate progress) earned by the schools at which the teachers worked.

High-Stakes Grade Levels and Elementary School Teachers

According to Gold (1985) and Maslach et al. (1996), teacher burnout occurs more often among urban secondary school teachers. However, recent findings from the Pedulla et al. study (2003) suggest that No Child Left Behind's high-stakes testing environment may place elementary school teachers at a greater risk of burnout:

We would not expect to see patterns of greater pressure on teachers at the lower grades, since the most severe consequences associated with state tests usually occur at the high school level. In these types of testing programs the stakes are much greater for high school students who must pass the test for graduation. . . . The pressure teachers experience as a result of the state test is influenced by the stakes attached to the test in combination with the grade taught Elementary teachers report significantly greater feelings of test-related pressure than teachers in the upper grades. . . . [Moreover] elementary teachers were almost twice as likely as high school teachers to suggest that teachers at their school wanted to transfer out of the grades in which the test was administered. (pp. 30-33)

Maslach et al. (1996) have reported burnout more common among urban secondary teachers. However, findings such as those reported in the Pedulla et al. study (2003) and others (Sunderman et al., 2003; Taylor et al., 2003) suggest otherwise. Their findings, suggesting mounting pressures and dissatisfaction among elementary school teachers, helped justify conducting the current study on teacher burnout among elementary school teachers.

The purpose of the review of No Child Left Behind accountability in relation to its testing mandates was to provide evidence suggesting that the legislation has generated

new variables that may be influencing teacher burnout (Maslach et al., 1996): subject area taught, grade level taught, and report card label earned. By presenting findings related to each variable, the review revealed gaps in extant research on teacher burnout as related to No Child Left Behind testing mandates. The next section presents the literature review's conclusion.

Conclusion

Chapter 2 presented a substantive review of information related to the dependent variable teacher burnout and pertinent information from the No Child Left Behind Act of 2001 (2002) legislation regarding the independent variable high-stakes subject areas and its mediating variables grade level taught and report card label earned. The section on burnout discussed the three subscales of burnout (Maslach et al., 1996), emotional exhaustion, depersonalization, and reduced personal accomplishment. Teachers suffering burnout's emotional exhaustion "can no longer give of themselves" (p. 28). Teachers suffering burnout's depersonalization, "no longer have positive feelings about their students. . . . tuning out students through psychological withdrawal" (p. 28). Teachers suffering burnout's reduced sense of personal accomplishment "no longer feel that they are contributing to students development. . . . [a situation] both severe and enduring" (p. 28). Evidence from numerous studies (Evers, Brouwers, & Tomic, 2002; Farber & Ascher, 1991; Hughes, 2001; Maslach & Jackson, 1981; Maslach & Pines, 1977) have illustrated the overall deterioration (Maslach et al., 1996) in job performance caused by burnout environments wherein work overload, lack of control, lack of fairness, lack of community, lack of reward, and value conflict reside.

The chapter reviewed current findings related to No Child Left Behind accountability. The chapter reviewed research findings concerning teacher reports of

increased dissatisfaction and stress and reduced morale (Abrams et al., 2003; Clarke et al., 2003; Kohn, 2005; Moon et al., 2003; Pedulla et al., 2003; Taylor et al., 2003) related to high-stakes testing. The review demonstrated how research findings on high-stakes testing provided evidence suggesting the pervasiveness of burnout's six areas of job and person mismatch within the current public school environment, especially among elementary school teachers (Pedulla et al., 2003), in particular, those teaching high-stakes subject areas or grade levels (Stecher & Barron, 2001). Collectively, information provided in the review served to justify the need for the quantitative cross-sectional study that sought to determine whether teacher burnout is influenced by No Child Left Behind high-stakes variables: subject area taught, grade level taught, and report card label earned.

Summary

The literature review contained two main sections that collectively aimed to justify the call for the quantitative cross-sectional study on teacher burnout in relation to variables emerging from No Child Left Behind mandates. The first section discussed the dependent variable, the psychological syndrome of burnout in its three dimensions, emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach et al., 1996) each of which, when present, impede job performance (Evers, Brouwers, & Tomic, 2002; Farber & Ascher, 1991; Hughes, 2001; Linden et al., 2005; Maslach & Jackson, 1981; Maslach & Pines, 1977). The second major section discussed the three variables that have emerged from the No Child Left Behind Act of 2001 (2002) mandate that 100% of the nation's public school children reach proficiency in mathematics and reading by 2014 (§ 1111): subject area taught, grade level taught, and report card label earned.

Chapter 3 provides a substantive description of and rationale for the methodology used in the quantitative cross-sectional study that examined the extent to which teacher burnout as manifested by emotional exhaustion, depersonalization, and reduced personal accomplishment was influenced by No Child Left Behind high-stakes testing variables: subject area taught, grade level taught, and report card label earned.

CHAPTER 3: METHOD

The purpose of the quantitative cross-sectional study was to compare the differences in the reported levels of burnout between second through fifth grade high-stakes versus low-stakes subject area teachers working in a large urban elementary school district in Arizona. The study also examined the extent to which grade level taught and school report card label influenced differences in reported levels of burnout. Teacher age, gender, and number of years teaching served as secondary independent variables that would be examined for any rejected null hypotheses related to the aforementioned variables.

Demographic and MBI-ES (Maslach et al., 1996) survey instruments were used to examine each of the study's research questions (and concomitant hypotheses) concerning burnout's three subscales, emotional exhaustion, depersonalization, and personal accomplishment as they related to the independent and mediating variables, subject area taught, grade level taught, and school report card label. SPSS 14.0 for Windows[®] software was used to analyze the data collected. Descriptive statistics were used to describe responses to the study's research questions, which are introduced in the next section. Analysis of variance (ANOVA) tests were used to investigate how the dependent variable, burnout, as manifested by emotional exhaustion, depersonalization, and personal accomplishment, was affected by the independent variable, subject area taught, and the mediating variables, grade level (2, 3, 4, and 5) taught, and school report card label (improvement or adequate progress). (See Figure 2.)

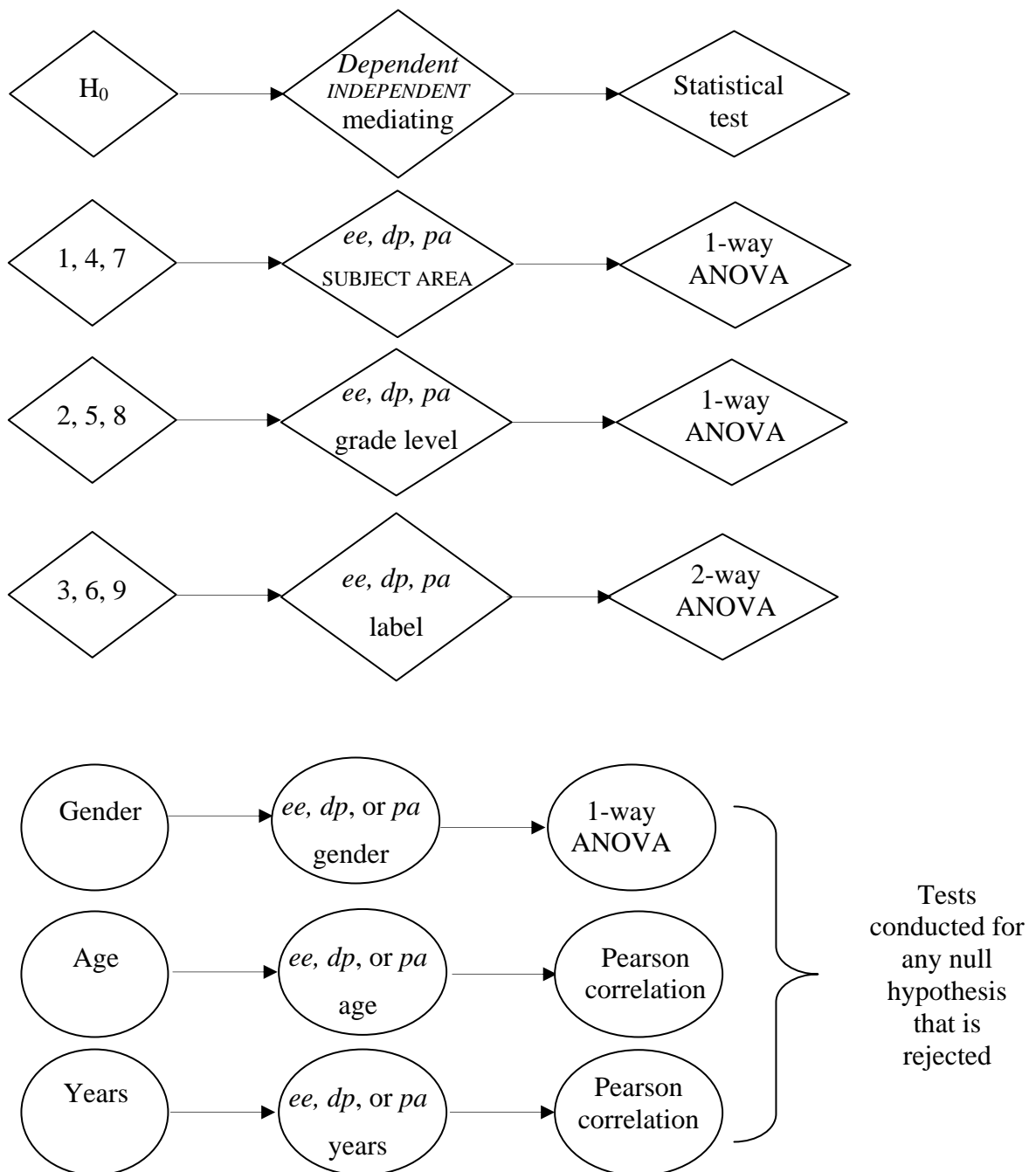


Figure 2. Research design map by null hypotheses and demographics. Abbreviations *ee*, *dp*, and *pa* represent emotional exhaustion, depersonalization, and personal accomplishment respectively.

The independent variable was defined generally as subject area taught, with mathematics and reading defined as high-stakes (Gunzenhauser, 2003) subject areas. Art, music, and physical education were defined as low-stakes (Abrams et al., 2003) subject areas, low stakes denoting areas without any known consequences related to test scores. The dependent variable, burnout as manifested by emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach & Jackson, 1981; Maslach et al., 1996), was defined generally as “the inability to function effectively in one’s job as a consequence of prolonged job-related stress” (Byrne, 1993, p. 197). For the mediating variable, grade level taught, grades 3 and 5 were defined as high-stakes grade levels. Grades 2 and 4 were defined as low-stakes grade levels. For the mediating variable, school report card label, the term improvement was defined as the high-stakes label. Adequate progress was defined as the low-stakes label.

Chapter 3 presents the following sections to describe and support the quantitative cross-sectional study: (a) design appropriateness including a reiteration of the research questions and hypotheses; (b) population; (c) sampling; (d) data collection process; (e) instrumentation; (f) internal and external validity; and (g) data analysis. The chapter concludes with a summary that reiterates the key points of the study concerning the extent to which teacher burnout was influenced by No Child Left Behind high-stakes testing variables: subject area taught, grade level taught, and report card label earned.

Design Appropriateness

According to Creswell (2002), a quantitative cross-sectional survey design is useful when comparing two groups. Such was the goal of the quantitative cross-sectional study that compared the responses of high-stakes and low-stakes subject area teachers to copyrighted questions (see Appendix B) dealing with teachers’ perceived levels of

emotional exhaustion, depersonalization, and personal accomplishment. Foundational evidence that “burnout can lead to a deterioration in the quality of care or service provided” (Maslach & Jackson, 1981, p. 1) substantiated the appropriateness of the study. Substantiating the appropriateness of the study’s design were findings from a recent cross-sectional study (Evers et al., 2002) in the Netherlands that showed a relationship between education reform and teacher burnout. Attention to education reform and burnout were inherent in the cross-sectional study of urban elementary school teachers charged with executing the mandates of No Child Left Behind legislation.

Maslach and Jackson (1981) and Maslach et al. (1996) reported that burnout studies designed to investigate workplace-related characteristics are likely to contribute to the field of burnout. Maslach et al. have also noted that quantitative studies are more appropriate to measuring burnout levels than qualitative exploratory survey studies. With federal appeals against No Child Left Behind legislation newly filed (*Pontiac v. Spellings*, 2005; *Pontiac v. Secretary*, 2006) and modifications to the legislation ongoing (Spellings, 2005; Sunderman & Orfield, 2006), a longitudinal study was also less appropriate when compared to a cross-sectional study.

The design of the study’s research questions helped compare differences in the reported levels of burnout of second through fifth grade urban elementary teachers working in today’s No Child Left Behind workplace. Research Questions 1-3 related to the burnout subscale of emotional exhaustion. Research Questions 4-6 related to the burnout subscale of depersonalization. Research Questions 7-9 related to the burnout subscale of personal accomplishment, which is scored in the opposite direction of

emotional exhaustion and depersonalization. High scores on the personal accomplishment subscale reflect a low, rather than high degree of burnout (Maslach et al., 1996).

1. What levels of emotional exhaustion are reported by teachers of high-stakes versus low-stakes subject areas?

2. How do the levels of emotional exhaustion reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4?

3. How do the levels of emotional exhaustion reported by teachers of high-stakes versus low-stakes subject areas change between improvement versus adequate progress schools?

4. What levels of depersonalization are reported by teachers of high-stakes versus low-stakes subject areas?

5. How do the levels of depersonalization reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4?

6. How do the levels of depersonalization reported by teachers of high-stakes versus low-stakes subject areas change between improvement versus adequate progress schools?

7. What levels of personal accomplishment are reported by teachers of high-stakes versus low-stakes subject areas?

8. How do the levels of personal accomplishment reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4?

9. How do the levels of personal accomplishment reported by teachers of high-stakes versus low-stakes subject areas change between improvement versus adequate progress schools?

The research questions outlined the comparison of differences in reported levels of burnout as a function of the independent and mediating variables that were believed to capture increased workplace demands and stress experienced by teachers in today's No Child Left Behind workplace. Research Questions 1, 4, and 7 identified subject area taught as the independent variable. Teachers responsible for reading and mathematics were viewed as facing higher workplace demands and stress. Research Questions 2, 5, and 8 identified grade level taught as a mediating variable. Grades 3 and 5, test-reporting years, were viewed as burdening reading and mathematics teachers with higher workplace demands and stress. Research Questions 3, 6, and 9 identified federal report card labels as another mediating variable. Schools labeled (needing) improvement rather than adequate were viewed as burdening reading and mathematics teachers with higher workplace demands and stress when compared to art, music, and physical education teachers.

Assuming the putative effects of No Child Left Behind legislation on workplace demands and stress occur as described above, then these effects were likely to be observed in responses to the emotional exhaustion, depersonalization, and personal accomplishment subscales of the MBI-ES. In other words, scores on the scales would change in a manner consistent with the effects described in the preceding paragraph. Hence, the cross-sectional study systematically examined differences in reported levels of burnout, as measured by each of the three subscales (emotional exhaustion, depersonalization, and personal accomplishment) as a function of changes in the type of subject area taught, grade level taught, and school report card label. Discussion continues

with an explanation of how the research questions and their concomitant hypotheses accomplished the goals of the quantitative cross-sectional study.

The No Child Left Behind Act of 2001 (2002) mandate calling for 100% proficiency in mathematics and reading by 2014 (§ 1111) has placed greater workload demands on teachers of high-stakes subject areas, mathematics and reading, versus low-stakes subject areas, namely art, music, and physical education. The study sought to determine whether the disproportionately distributed workload demand predisposed high-stakes subject area teachers to burnout. If so, burnout's characteristic deterioration (Linden et al., 2005; Maslach, 1976; Maslach & Jackson, 1981; Maslach & Pines, 1977; Maslach et al., 1996; Maslach et al., 2001) in service quality might prevent high-stakes subject area teachers from helping students reach proficiency by 2014. The importance of learning the extent to which high-stakes subject area teachers suffer from the debilitating effects (Evers et al., 2002; Farber & Ascher, 1991; Hughes, 2001; Maslach & Jackson, 1981; Maslach & Pines, 1977; Maslach et al., 2001) of burnout prompted Research Questions 1, 4, and 7 that examined differences in reported burnout levels (as manifested by emotional exhaustion, depersonalization, and personal accomplishment) in relation to high-stakes versus low-stakes subject area.

The federally mandated (No Child Left Behind Act of 2001, 2002) reporting system (§ 1112) informs the public whether or not schools have achieved adequate yearly progress. Reporting systems require that each district report the measured progress of its schools by using the achievement scores of students in designated reporting grades, in Arizona, grades 3 and 5 at the elementary school level ("State of Arizona," 2003). Pressured by the accountability demands placed upon their grade levels' performance on

high-stakes tests in mathematics and reading, third and fifth grade teachers may experience greater stress levels of burnout than their second and fourth grade counterparts as was found by Stecher & Barron (2001), who conducted a study on accountability testing and test-reporting grades. Because art, music, and physical education classes consist of multiple grade levels, Research Questions 2, 5, and 8 appropriately restricted their focus on high-stakes subject area teachers.

Examining the differences in burnout levels reported by high-stakes subject area teachers in grades 3 and 5 versus grades 2 and 4 helped determine whether burnout levels varied further dependent upon grade level taught. The importance of learning whether third and fifth grade high-stakes subject area teachers suffered from the debilitating effects (Farber & Ascher, 1991; Hughes, 2001; Linden et al., 2005; Maslach, 1976; Maslach & Jackson, 1981; Maslach & Pines, 1977; Maslach et al., 2001) of burnout at greater levels than their second and fourth grade counterparts prompted Research Questions 2, 5, and 8 that examined differences in reported burnout levels (as manifested by emotional exhaustion, depersonalization, and personal accomplishment) in relation to high-stakes and low-stakes grade levels.

Teachers have reported increased stress and reduced morale (Boaler, 2003; Center on Education Policy, 2006; Inman & Marlow, 2004; Kohn, 2005; Rhodes et al., 2004; Taylor et al., 2003) related to “demoralizing” (p. 46) reporting systems. Because feelings of increased stress and reduced morale suggest burnout (Maslach & Jackson, 1981; Maslach et al., 1996), the research sought to investigate whether reported burnout levels among high-stakes and low-stakes subject area teachers were further influenced by the legislation’s (No Child Left Behind Act of 2001, 2002) mandated reporting system,

which requires the assignment of adequate progress or improvement labels. Accordingly, teacher burnout was investigated in schools labeled improvement schools and schools earning the more favorable label, adequate progress.

The importance of learning whether high-stakes subject area teachers working in improvement schools suffered from the debilitating effects (Evers et al., 2002; Farber & Ascher, 1991; Hughes, 2001; Linden et al., 2005; Maslach & Jackson, 1981; Maslach et al., 2001) of burnout at greater levels than those working in adequate progress schools prompted Research Questions 3, 6, and 9 that examined differences in reported burnout levels (as manifested by emotional exhaustion, depersonalization, and personal accomplishment) among high-stakes versus low-stakes subject areas in relation to improvement versus adequate progress labels.

The discussion of the research questions supported their appropriateness to the goals of the quantitative cross-sectional study on burnout within the No Child Left Behind work environment. The research questions were tested through statistical analyses of collected survey data. All decisions on the statistical significance of the findings were made using an alpha level of .05. Table 3 reiterates the research questions' concomitant hypotheses in their null and alternative forms.

Table 3

Null and Alternative Hypotheses

Null Hypotheses	
H1 ₀	There will be no statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes versus low-stakes subject areas.
H2 ₀	There will be no statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.
H3 ₀	There will be no statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.
H4 ₀	There will be no statistically significant difference in the mean depersonalization score for teachers of high-stakes versus low-stakes subject area teachers.
H5 ₀	There will be no statistically significant difference in the mean depersonalization score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.

(table continues)

Table 3 (*continued*)

H6 ₀	There will be no statistically significant difference in the mean depersonalization score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.
H7 ₀	There will be no statistically significant difference in the mean personal accomplishment score for teachers of high-stakes versus low-stakes subject area teachers.
H8 ₀	There will be no statistically significant difference in the mean personal accomplishment score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.
H9 ₀	There will be no statistically significant difference in the mean personal accomplishment score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.
Alternative Hypotheses	
H1 _A	There will be a statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes versus low-stakes subject areas.

(table continues)

Table 3 (*continued*)

H2 _A	There will be a statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.
H3 _A	There will be a statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.
H4 _A	There will be a statistically significant difference in the mean depersonalization score for teachers of high-stakes versus low-stakes subject area teachers.
H5 _A	There will be a statistically significant difference in the mean depersonalization score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.
H6 _A	There will be a statistically significant difference in the mean depersonalization score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.

(table continues)

Table 3 (*continued*)

H7 _A	There will be a statistically significant difference in the mean personal accomplishment score for teachers of high-stakes versus low-stakes subject area teachers.
H8 _A	There will be a statistically significant difference in the mean personal accomplishment score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.
H9 _A	There will be a statistically significant difference in the mean personal accomplishment score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.

Findings from current studies (Abrams et al., 2003; Boaler, 2003; Moon et al., 2003; Sunderman et al., 2004; Taylor et al., 2004) called attention to the dissatisfaction, pressures, and stress reported by teachers in relation to high-stakes testing mandates. However, none were found with a focus on No Child Left Behind high-stakes testing in relation to teacher burnout as manifested by emotional exhaustion, depersonalization, and reduced personal accomplishment. The lack of studies investigating burnout in relation to high-stakes testing represented a gap in research. Teacher descriptions of dissatisfaction and reduced morale suggested the existence of the workplace mismatches believed to cause burnout (Maslach et al., 2001) that were reviewed in Chapter 2 (namely, work

overload, lack of reward, lack of control, lack of community, lack of fairness, and value conflict). If burnout is the real source of the problematic conditions and symptoms reported by teachers, its debilitating effects (Evers et al., 2002; Farber & Ascher, 1991; Hughes, 2001; Linden et al., 2005; Maslach et al., 2001) may interfere with the learning potential of the very children the federal legislation has focused on, children suffering from the achievement gap.

Population

The population for the quantitative cross-sectional study included fulltime teachers working in a large urban elementary school district in Maricopa County, Arizona. To maintain the district's anonymity, the district was called the Desertside Elementary School District. No Child Left Behind's mandate to close the achievement gap (No Child Left Behind Act of 2001, 2002, § 1001) prompted a search to locate a population of teachers working in a school setting that provided instruction to children on whom the federal legislation focuses, namely, minority and disadvantaged children (§ 1001). Previous research findings (Abel & Sewell, 1999; Farber, 1984; Farber & Ascher, 1991) had already investigated burnout levels among urban versus suburban and rural locations. By contrast, the current study focused on urban teachers exclusively. The exclusivity helped examine the extent to which No Child Left Behind work environment influenced burnout levels that differed dependent upon the urban elementary school teacher's assigned subject area, grade level, and school label. The section on population continues with a discussion of the minority student in Arizona.

Arizona's Minority Student

Information within this section serves to support the decision to conduct the quantitative cross-sectional study in a public school setting where the population of

teachers serviced a majority of Hispanic and minority students. Details from Arizona's state and city demographics supported the selection of a district servicing a largely Hispanic population. According to the 2000 Census (U.S. Census Bureau, 2004), Arizona's Hispanic population is more than twice the nation's average. Maricopa, Arizona's largest county, holds 60% of the state's total population of 5,580,811 people. Phoenix, which is the largest city in Maricopa (and Arizona city with more than 1,321,045 people, also has the largest Hispanic population in the state, 449,972.

The NCES (2003) reported that more than half the nation's public schools are located in large or midsize cities and "accounted for more than two-thirds (69 percent) of all public school students" (Table 8). According to the Arizona Department of Education (2004b), the total population of public school children in Arizona in 2004 was 978,128. Maricopa contained the majority of this population (N = 626,461) based on data from the Research and Evaluation Department (Arizona Department of Education, 2004a). Maricopa's demographics were comprised of 49% White, 37% Hispanic, 6% Native American, 5% African American, and 2% Asian (Arizona Department of Education, 2004a).

Additional information supporting the decision to conduct the study in a public school setting was provided by the Office of English Language Acquisition (The National Clearing House, 2004), which reported that in the 1992-1993 school year there were 83,643 public school students classified as limited English proficient (LEP) in Arizona. By the 2002-2003 school year, that number had grown to 149,354, reflecting a 78.6% increase. The statistics, along with those of the U.S. Census Bureau (2004) concerning Arizona, corroborated what demographic scholar, Hodgkinson (2002) had suggested,

namely, that the Hispanic population (along with Asians) will make up 61% of the country's population growth by 2025 with only a few states such as Arizona absorbing most of the growth. Such evidence supported the decision to conduct the quantitative cross-sectional study in a public school setting where the teacher population serviced a majority of Hispanic students.

Desertside Elementary School District

The Desertside (pseudonym used to preserve the district's anonymity) Elementary School District is located in Maricopa County, Arizona and is among the largest urban elementary school districts within this urban setting, servicing over 19,000 public school students, 80% of them approved for free and reduced lunch, and approximately 85% of them Hispanic. Maricopa County (2004) reported 34 of its districts are elementary districts and 15 are unified (that is, high school and elementary). While the ratio supported selection of an elementary school district, there were additional reasons why an elementary school district represented the appropriate setting for conducting the study.

Elementary school grades represent the first of "three grade spans (3-5; 6-9; and 10-12)" (U.S. Department of Education, 2003, p. 12) identified for No Child Left Behind test assessments in mathematics and reading. The Arizona formula of assessment (Arizona Department of Education, 2004) pertaining to No Child Left Behind accountability targets only one middle school and one high school grade for reporting, grade 8 and grade 10 respectively (Arizona Department of Education, 2004). By contrast, elementary schools contain two test-reporting grades, namely, grades 3 and 5, facilitating the more robust investigation of the mediating effect of grade level taught on reported burnout levels.

In one of its studies, the Education Trust (2004) observed that elementary schools have been at the center of reform efforts and that the effects of change driven by new accountability systems were likely to be felt first in elementary schools. They noted further that elementary schools represented the biggest share of schools receiving federal aid to help educate impoverished children. While burnout studies have reported that urban secondary teachers report higher levels of burnout than their elementary school counterparts (Gold, 1985; Maslach et al., 1996), results from recent studies about teachers in the recent education workplace (Luekens et al., 2004; Pedulla et al., 2003; Sunderman et al., 2004) have shown that the majority of teachers reporting dissatisfaction, lowered morale, and increased stress have been elementary school teachers. These findings supported the rationale for investigating burnout levels at the elementary school level.

Lending additional support for the selection of the Desertsides Elementary School District was its policy to provide all students with art, music, and physical education classes. The policy aligned well with research questions that investigated differences in reported burnout levels in relation to high-stakes subject areas, mathematics and reading, versus low-stakes subject areas, the art, music, and physical education.

Art, music, and physical education teachers in the Desertsides Elementary School District are assigned to teach multiple grade levels. The multiple-grade configuration influenced the design of Research Questions 2, 5, and 8. The three questions restricted their investigation of burnout to mathematics and reading (high-stakes) subject area teachers of grade levels 3 and 5 (high-stakes) and 2 and 4 (low-stakes). The three questions did not investigate burnout among low-stakes subject area teachers, since because of their multi-grade nature of their teaching assignment.

In Arizona, federal school report card labels become public record in October (Arizona Department of Education, 2005). In October 2005, there were two elementary schools within the Desertsides School District that had failed to earn adequate progress labels, earning instead, improvement labels. Two improvement schools helped address research questions concerning teacher burnout in relation to report card label earned. The next section describes and supports the sample population.

Sampling

The selection of teachers in grades 2 through 5 from the population of elementary school teachers aligned with the quantitative cross-sectional study's variables. Third and fifth grade teachers represented high-stakes subject area teachers, those responsible for preparing students for high-stakes tests in mathematics and reading whose reported scores influence federal report card labels. Second and fourth grade teachers represented low-stakes subject area teachers. Data collected from completed surveys of these two groups of teachers produced results, which answered the research questions concerning the independent variable, subject area taught, and the mediating variable, grade level taught. To avoid alerting and possibly sensitizing teachers to the significance of their school's report card label to the study, information regarding the mediating variable, report card label earned, was ascertained from school and district report card information available on the Arizona Department of Education (2005) web site.

The sample consisted of high-stakes and low-stakes subject area teachers from grades 2 through 5 working in the 11 (of 13) Desertsides elementary schools that had accepted the invitation to participate in the survey. The principals of the 11 participating schools were informed the survey was a human services survey of teacher attitudes. (The request to conduct research form, which was successfully submitted to the target district's

superintendent, required additional information as shown in Appendix D. The additional information did not disclose the burnout issue.)

Of the 11 schools, 9 had received adequate progress labels, and two, improvement labels. Rather than random, the sample population was stratified according to job characteristics, a procedure suggested in the *MBI Manual* (Maslach, 1996), which provides normative data on teachers ($N = 4,163$) to which data from the group of respondents is then compared. Substantiating the appropriateness of the sample design, Neuman (2003) stated it is acceptable for researchers to seek out “unique cases that are especially informative” (p. 213) should they need specific information. Because the research sought to determine if differences in reported levels of burnout between high-stakes and low-stakes subject area teachers was mediated by grade level taught, second through fifth grade teachers were selected. Targeting low-stakes grades 2 and 4, which have ordinal proximity to the high-stakes grades 3 and 5, provided a relatively balanced sample of teachers, 123 and 134 respectively. (See Table 4.)

Table 4

Population of Teacher Respondents

Total Population		452
Sample Population		294
Subject Area	High-stakes	257
	Low-stakes	34
Grade	3 & 5	134
	2 & 4	123
Non sampling	K-1, Special Education & Speech	158

Note. Low-stakes subject area respondents were categorized as one unit during analysis, since art, music, and physical education teachers are assigned to teach multi-grade classes. Discrepancies in sampling totals represent missing data.

The sample consisted of teachers who completed and returned surveys, which were administered during scheduled meetings at the 11 participating schools. Based on reports from research assistants, more than 90% of the surveys distributed were completed and returned, but exact numbers are unknown. The percentage is a conservative approximation, since only two of the 11 assistants reported that a few teachers had not completed and returned the survey.

Teachers excluded from the sampling (namely, Kindergarten, First Grade, Speech, and Special Education) were invited to complete the survey for two reasons. First, their inclusion facilitated the distribution of survey packets by research assistants. Second, ensuring that no teachers were without a task decreased inadvertent distraction to and influence on the targeted second through fifth grade teachers completing the survey, who might have otherwise rushed to complete their survey out of consideration for waiting colleagues.

Data Collection Process

A pilot study conducted using elementary school teachers from a district other than Desertside provided information regarding the administrative efficacy of the assembled survey packet and the clarity of its demographic survey instrument only, since the MBI-ES instrument had already been confirmed as a validate and reliable instrument (as will be learned in the next section). Data from the pilot, which is discussed fully in Chapter 4, was not scored or included in the study.

Approval of the request to conduct research at Desertside (see Appendix D) and the cooperation of the Arizona Education Association's local association president facilitated the training of teachers as research assistant. The research assistants were procured based on the local association president's recommendation to train teachers who served as association representatives at each school. During training, research assistants acquired skills to administer the survey. Training was considered complete when all questions concerning the administration process were answered and all research assistants expressed confidence in their ability to complete their administrative responsibilities successfully. The survey's administrative process is now described.

Packets were delivered to research assistants within two days of regularly scheduled faculty meetings. At the beginning of one the meetings as prearranged with each school's principal, teachers received survey packets from their building's research assistant. As directed in their script (see Appendix C), research assistants did not distribute survey packets until they had reminded principals and assistant principals to leave the meeting to afford the recommended (Maslach et al., 1996) comfort to teacher respondents.

Research assistants distributed to teachers research packets containing: (a) letter of introduction and informed consent agreement as shown in Appendix E; (b) demographic survey instrument as shown in Appendix A; and (c) the copyrighted MBI-ES instrument (see Appendix B). Teachers learned from the informed consent agreement that participation in the study was voluntary and that they had the right to terminate participation in the study at any time. Further, they learned there were no anticipated risks to teachers, since issues regarding the protection of human subjects had been addressed, but that there might be benefits derived from the study's results.

Guided by the researcher-prepared script, research assistants (a) reminded administrators to leave the room during survey administration; (b) distributed the survey packets; (c) read aloud the informed consent agreement; (d) clarified instructions as necessary; (e) maintained quiet during the survey's completion; (f) collected completed survey packets, checking that each item was completed on each survey instrument; (g) placed completed packets in the envelope provided; and (h) delivered the envelope to the school secretary. Research assistants were trained to restate appropriate passages within

the script and survey directions rather than respond extemporaneously to any questions posed to them by teachers.

The sealed envelopes containing each school's completed surveys were collected from each school secretary within two days of their completion. To avoid threats to internal validity by sensitizing teachers to the relevancy of their school's federal report card label, teachers were not asked to identify their school or its label. Instead, each school's federal report card label was accessed from the Arizona Department of Education (2005c) web site. The procedure designed to track each school and its federal label involved letter coding. Letter codes were placed on each envelope (containing completed survey forms) once they were collected and off school property. The two improvement schools were assigned A and B. The remaining schools were assigned letters C through K, assignments based solely on the order in which envelopes were collected. School and school report codes were added to the data set during the data entry period.

Data were entered into an ASCII file using MS DOS editor after which the text file was read into SPSS 14.0 for Windows[®] for analyses (see Data Analysis). The packets have been secured and will be maintained for no more than seven years after the completion of the quantitative cross-sectional study.

Instrumentation

The MBI (Maslach et al., 1996) instrument measures the three subscales of burnout: emotional exhaustion, depersonalization, and personal accomplishment. The instrument consists of 22-questions, nine for emotional exhaustion, five for depersonalization, and eight for personal accomplishment. For emotional exhaustion and

depersonalization, higher scores indicate higher levels of burnout. By contrast, high scores on the personal accomplishment indicate low levels of burnout's reduced personal accomplishment. The personal accomplishment subscale is therefore scored in the opposite direction of emotional exhaustion and depersonalization. High scores on the personal accomplishment subscale reflect a low, rather than high degree of burnout (Maslach et al., 1996).

The only modification to questions on the MBI-ES versus other MBI surveys is its use of the word student rather than recipient. As with other MBI instruments, the MBI-ES measures each burnout subscale separately. MBI instruments measure frequency using a 6-point Likert-type scale ranging from 0 (Never) to 6 (Every day). In the first edition of the MBI (Maslach & Jackson, 1981), intensity (how strong) had been assessed also. Iwanicki and Schwab (1981) supported the use of intensity *or* frequency after their findings supported the construct validity of the burnout instrument. Similarly, Gold (1984) suggested that frequency and intensity scoring systems were so likely to “yield comparable factor structures. . . it would appear that either scoring system would suffice” (p. 1016). More recently, correlations between the two dimensions, frequency and intensity, were shown to be high enough to support the use of one dimension (Maslach et al., 1996), namely, frequency.

The MBI instrument has been used in “over 90% of journal articles and dissertations” (Schaufeli et al., 2001, p. 566) related to burnout when compared to the second most popular instrument, the Pines and Aronson *Burnout Measure* (BM), used in approximately 5% of burnout studies. Confirming the validity and reliability of the three-subscale structure of the MBI reported in the *MBI Manual* (Maslach et al., 1996 are

recent factor analysis studies (e.g., Bakker et al., 2002; Schaufeli, Bakker, Hoogduin, Schaap, & Kladler, 2001). Supporting the reliability of the instrument's internal consistencies are Cronbach alpha estimates of .90 (emotional exhaustion), .76 (depersonalization), and .76 (personal accomplishment) reported by Iwanicki & Schwab (1981). Gold (1984) reported estimates of .88 for emotional exhaustion, .74 for depersonalization, and .72 for personal accomplishment. Schaufeli et al. (2002) noted more generally that estimates are typically above .70.

In spite of holding a general belief in the instrument's reliability and validity, researchers have expressed concern. For example, in acknowledging the need for a burnout instrument for non-service professionals, Bakker et al. (2002) noted the distinction and limitation of the depersonalization subscale used in the MBI-ES when compared to the cynicism subscale used in the General Survey. Whereas "depersonalization refers to distancing oneself emotionally from service recipients . . . cynicism refers to distancing oneself from work itself and to the development of negative attitudes towards work in general" (p. 246).

Another concern expressed by researchers involved specific survey questions. Byrne (1993) suggested that it may be better to omit or modify questions 12 and 16, related to "perceived personal accomplishment and emotional exhaustion respectively" (p. 208) for all but university level teachers. While acknowledging Byrne's work, Maslach et al. (1996) have maintained, nonetheless, the 22-question model should be maintained and that the two questions should not be omitted. (As described in Appendix B, copyright requirements prohibit presentation of questions.) Final concern related to the three-factorial model itself. While supporting the validity of the three-factorial model

over the two-factorial Pines and Aronson model, Schaufeli et al. (2001) suggested that personal accomplishment might not play as central a role. Additionally, Maslach et al. (1996) acknowledged Lee and Ashford's findings that emotional exhaustion played a central, though not exclusive role in burnout. Discussion of the survey instruments continues with a description of the demographic survey instrument.

In addition to the MBI-ES, the study utilized a researcher-prepared demographic survey instrument to gather information on subject area and grade level taught. Generalist and specialty area were the terms used on the instrument to ascertain whether teachers completing the survey were high-stakes or low-stakes subject area teachers. The terms chosen represent the classification used by the National Board for Professional Teaching Standards (2003), which defines elementary school teachers assigned to teach the subject areas of mathematics and reading as generalists and teachers assigned to teach art, music, and physical education as specialty area teachers.

The demographic survey instrument also gathered data pertaining to age, gender, and number of years teaching, data that would be examined for any rejected null hypotheses. The demographic choices, age, gender, and number of years teaching, were chosen based on demographic data collected in two recent cross-sectional survey studies on teacher burnout (Abel & Sewell, 1999; Evers et al., 2002). The Abel and Sewell (1999) quantitative cross-sectional study on teacher burnout in rural versus urban locations collected data on gender (only) in addition to data on variables related to burnout and location. Within their study, Abel and Sewell specifically recommended that future burnout studies should include gender.

The Evers et al. (2002) cross-sectional study, which examined reported levels of burnout among teachers (in the Netherlands) in relation to national reform measures, collected data on age, gender, number of years teaching, and weekly work hours in addition to data on variables related to burnout and national reform measures. The similarity of purpose between the Evers et al. (2002) study and the current study on teacher burnout in relation to variables associated with (No Child Left Behind) national reform measures reinforced the appropriateness of including gender and prompted the inclusion of age and number of years teaching. (Collection of data on work hours used in the Evers et al. study was not applicable, since the targeted population consisted of fulltime teachers).

External Validity

To avoid threats to external validity, care was taken to select a setting for the quantitative cross-sectional study conducive to the generalization of the results (Creswell, 2002) to other elementary school settings. A caveat proffered by Klein and Smith (as cited in Miklowitz & Clarkin, 1999) correctly noted that “just because a study is done in a community setting does not guarantee that its results are generalizable to other community settings” (¶ 2). Accordingly, a district was chosen for the quantitative cross-sectional study whose demographics were representative of the population of urban districts in Maricopa, Arizona. Additionally, the study focused on one rather than multiple districts, because the research sought to control for differences in resources at different urban districts. For example, financial assistance acquired through bonds or grant money varies across districts, ameliorating conditions in some but not all urban districts.

The nature of a cross-sectional versus longitudinal study restricted generalizing results (Evers et al., 2001) to a greater population, since results were based on one place and time. However, selecting an urban district in which the population of students was representative of Arizona's population of minority students strengthened the ability to generalize the study's results to elementary school teachers working in similar urban settings that service minority students, on whom No Child Left Behind legislation focuses.

Internal Validity

To minimize the threat to internal validity due to participant interaction (Creswell, 2002), teachers completed the MBI-ES in a private, group setting as recommended by Maslach et al. (1996). To minimize threats to internal validity related to history (Athabasca, 2006), surveys were completed just before Spring 2006 recess. The timing of the survey's administration was prudent for several reasons. Before Spring recess 2006, teachers were likely to have acclimated to their school labels of adequate progress or improvement, which had been announced in October 2005. Conducting the research in the Spring reduced the threat to internal validity since "historical events [like label announcements] may interact with selection because individuals in different groups come from different settings" (Creswell, 2002, p. 326), namely, schools with different labels or schools whose labels had changed from one label to another.

The research investigated whether report card labels influenced differences in reported levels of burnout between high-stakes and low-stakes subject area teachers. To minimize threats to internal validity due to bias, care was taken to avoid the unreliability emerging from "differential treatment of the two groups" (Athabasca, 2006, § i, ¶ 1). To

avoid sensitizing teachers at improvement schools (or alerting them to the investigation of federal report card labels) teachers were not asked to identify the location of their school assignment. Furthermore, no oral or written mention of school report card labels (federal or state) occurred during the interaction with Desertsides teachers and administrators. Instead, each school's federal report card label was accessed from the Arizona Department of Education (2005c) web site. Letter codes were placed on each envelope (containing completed survey forms) at an off school site location immediately after envelopes were collected from each school. The two improvement schools were assigned A and B. The remaining schools were assigned letters C through K, assignments based on the order in which envelopes were collected. School and school report codes were added to the data set during the data entry period.

Data Analysis

Frequency distributions were formed for all of the variables on the demographic instrument, except number of years teaching. Number of years teaching was summarized using typical measures of central tendency and variation. For each of the three subscales (emotional exhaustion, depersonalization, and personal accomplishment), responses to individual MBI-ES items were transformed to raw score totals. Totals were then classified according to into low, average, and high classifications according to scoring criteria provided by MBI-ES authors (Maslach et al., 1996).

For purposes of addressing the study's research questions, a separate analysis of variance was conducted for each of the three outcome measures (emotional exhaustion, depersonalization, and personal accomplishment). In each of these three identical analyses of variance, the dependent variable was one of the three raw score totals and the design factors were subject area (high-stakes versus low-stakes), grade (high-stakes

versus low-stakes), and school label (improvement versus adequate progress). For each significant main effect or interaction, tables or figures were prepared to present relevant means for interpretation of the findings. In some cases, cross-tabulated frequency tables were used to examine the pattern of dependent variable responses across levels of the ANOVA factors.

Regarding the sample population and grade level, the analysis of variance design had five levels of grade classification: second, third, fourth, and fifth grades plus an “other” category designed to efficiently and effectively capture the teachers of low-stakes subject areas. Low-stakes subject area teachers were classified as other, since art, music, and physical education teachers in the Desertsides Elementary School District are assigned to teach multi-grade classes. Research Questions 2, 5, and 8, which reflect the classification, limited their examination to how differences in burnout subscales reported by teachers of (only) high-stakes subject areas changed between grade levels 3 and 5 versus grade levels 2 and 4.

Regarding the sample population and report card label, the analysis of variance design had two levels of school classification (improving versus adequate progress). Nested within each level of school classification were schools, two classified as improving, nine classified as adequate progress schools. Because the school label factor differentiated both the high-stakes and low-stakes subject areas and grades, a series of specific contrasts were used to capture information pertaining to the research questions. All analyses of variance were conducted using SPSS 14.0 for Windows. As recommended in the *MBI Manual* (Maslach et al., 1996), normative data on the means and standard deviations for each burnout subscale (see Table 5) were used for analyses.

Table 5

Means and Standard Deviations for the MBI Subscales

MBI Subscale	Emotional	Depersonalization	Personal
<i>N</i> = 4,163 teachers	Exhaustion		Accomplishment
M	21.25	11.00	33.54
SD	11.01	6.19	6.89

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Low, average, and high burnout scores provided by the *MBI Manual* (Maslach et al., 1996, p. 6) were used to report results to teacher respondents who request survey result information (see Table 6).

Table 6

Categorization of MBI Scores for Teacher Subgroup

MBI Subscale	Range of Experienced Burnout		
	Low	Average	High
<i>N</i> = 4,163 teachers			
Emotional Exhaustion	≤ 16	17 - 26	≥ 27
Depersonalization	≤ 8	9 - 13	≥ 14
Personal Accomplishment	≥ 37	36 – 31	≤ 30

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As recommended by Maslach et al. (1996), teacher respondent scores were analyzed as aggregate data after which teacher respondent scores on each of burnout's three dimensions were analyzed according to the independent variable subject area taught and the mediating variables of grade level taught and report card label earned (see Table 7).

Table 7

Categorization of Teacher Population

Teachers					
HSSA				LSSA	
Reading & mathematics				Other: art, music, physical education	
HSG	LSG	HSL	LSL	HSL	LSL
3 & 5	2 & 4	IM	AP	IM	AP

Note. HSSA = high-stakes subject area. LSSA = low-stakes subject area. HSG = high-stakes grade level. LSG = low-stakes grade level. HSL = high-stakes label.

LSL = low-stakes label. IM = improvement schools. AP = adequate progress schools.

This section discussed the appropriateness of the data analysis procedures that were followed in order to examine the research questions designed to compare differences in the three subscales of burnout levels across subject areas, grade levels and school labels. The following summary highlights key points within Chapter 3.

Summary

Chapter 3 described and supported the methodology and research design used for the quantitative cross-sectional study. The study sought to determine the extent to which No Child Left Behind high-stakes testing variables influenced reported levels of burnout as manifested by emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach et al., 1996) among second through fifth grade teachers working in an urban elementary school district in Maricopa County, Arizona. Accordingly, mathematics and reading were considered high-stakes (Gunzenhauser,

2003) subject areas, while art, music, and physical education were considered low-stakes subject areas. Teacher burnout (Maslach & Jackson, 1981) was defined generally as “the inability to function effectively in one’s job as a consequence of prolonged job-related stress” (Byrne, 1993, p. 197).

Teachers from 11 schools in the Desertsides Elementary School District, who agreed to participate, completed a survey instrument consisting of the MBI-ES and a researcher-prepared demographic survey instrument. The survey was conducted at the beginning of a regularly scheduled faculty meeting at each school site and was administered by teachers trained to be research assistants. Data analysis was conducted using SPSS 14.0 for Windows[®] software. Attention to the selection of the targeted urban elementary school district helped increase ability to generalize to the population of urban elementary school districts in Arizona.

CHAPTER 4: RESULTS

The purpose of the quantitative cross-sectional study was to compare the differences in the reported levels of burnout between second through fifth grade high-stakes and low-stakes subject area teachers working in a large urban elementary school district in Arizona. The study also examined the extent to which grade level taught and report card label earned influenced differences in reported levels of burnout. Data on gender, age, and number of years teaching were used when a null hypothesis was rejected to determine whether gender, age, and number of years teaching influenced results.

The independent variable was defined generally as subject area. Mathematics and reading were defined as high-stakes subject areas. Art, music, and physical education were defined as low-stakes subject areas. The dependent variable was burnout as manifested by three subscales of emotional exhaustion, depersonalization, and personal accomplishment (Maslach & Jackson, 1981; Maslach et al., 1996). For the mediating variable, grade level taught, grades 3 and 5 were defined as high-stakes grade levels. Grades 2 and 4 were defined as low-stakes grade levels. For the mediating variable, school report card label, the term improvement was defined as the high-stakes label. Adequate progress was defined as the low-stakes label.

Demographic and burnout (Maslach et al., 1996) survey instruments were used to examine each of the study's research questions and concomitant hypotheses concerning the aforementioned dependent, independent, and mediating variables. SPSS 14.0 for Windows[®] software was used to analyze the data collected. Descriptive statistics described the sample population. Analysis of variance (ANOVA) tests investigated relationships defined by the study's research questions.

Chapter 4 is organized as follows. The first section describes the pilot study and adjustments that were made to the administrative procedures of the actual study based on pilot study feedback. The chapter continues with a description of the data collection process involving teachers from 11 schools in a large urban elementary school district in Arizona. The next major section describes data analysis preparation: (a) the data entry process; (b) treatment of missing data and incomplete forms; and (c) syntactical adjustments of preliminary data tables.

The next two sections describe the data collection process and data analysis preparation. The presentation of results continues with a section describing the sample population. The preliminary analyses section that follows presents reliability results related to Cronbach's alpha testing. The section also presents comparisons of sample population data to normative data on teacher burnout. The descriptive statistics section presents information related to (a) the burnout subscales, emotional exhaustion, depersonalization, and personal accomplishment; (b) the study's independent variable, subject area; and (c) the mediating variables grade level and report card label.

The next major section, analyses of the research questions, presents results based on the study's research questions. The questions are grouped into subsets according to the three subscales of the dependent variable, burnout. Research Questions 1, 2, and 3 describe results related to emotional exhaustion. Research Questions 4, 5, and 6 describe results related to depersonalization. Research Questions 7, 8, and 9 describe results related to personal accomplishment.

The last section in Chapter 4 is a summary that reviews key points related to the sample group. The summary also reviews key points related to results concerning each

subset of research questions. The summary concludes by introducing Chapter 5, which presents conclusions and recommendations related to the quantitative cross-sectional study on the relationship between No Child Left Behind high-stakes testing and teacher burnout.

Pilot Study

The purpose of the pilot study was to ascertain the administrative efficacy of the assembled research packet and the clarity of the researcher-prepared demographic survey instrument only, since the MBI-ES is a validated and reliable instrument as described in Chapter 3. Accordingly, no data was compiled from the pilot study, which involved eight teachers with elementary school certification who were not employed by Desertside Elementary School District. Constructive feedback emerging from the discussion that followed the survey's administration helped generate revisions related to the administrative process that are now described.

The first revision related to the directions. Several teachers within the pilot study admitted they had completed the survey instruments without having read either instrument's directions. Their failure to read the directions was deemed problematic, since the oral instructions read to them by the teacher acting as research assistant had specifically stated they were to read the instructions before completing the survey's demographic survey instrument and the MBI-ES. Consequently, research assistant's script was modified. For the actual study, teacher respondents were instructed to read each instrument's directions silently as the research assistants read the directions aloud.

The second revision related to the assemblage of the research assistant's script and survey packet. The teacher acting as research assistant during the pilot study

described the awkwardness experienced when attempting to read from the script while displaying, as directed, each survey packet item as it was referenced. Moreover, teachers who completed the surveys within the pilot stated they felt uncomfortable observing their colleague who served as research assistant mishandle the script and survey packet items. From the productive discussion emerged a revised research assistant script. As shown in Appendix C, the revised script incorporated copies of the consent agreement, demographic survey instrument, and MBI-ES directly into the script according to the sequence to which each was referenced.

Data Collection Process

Having received approval to conduct research as shown in Appendix D, and with the cooperation of the Arizona Education Association local president of Desertside School District, teacher representatives at each site were trained to serve as research assistants. During training, research assistants acquired skills to administer the survey. At no time did they see the actual MBI-ES survey questions until the actual day of survey administration. However, research assistants were told the survey contained 22 questions. Training was considered complete when all questions concerning the administration process were answered and all research assistants expressed confidence they would be able to complete their administrative responsibilities successfully.

During a two-week period, survey packet materials were hand delivered to the research assistants at each of ten Desertside schools. One set of survey packet materials was delivered to a principal who secured them in a safe until the research assistant was available to accept them. The materials included the following: (a) a sealed envelope holding survey packets; (b) a research-assistant script included as a precaution against

loss of the script used during training; (c) pencils; (d) gift bag and index cards for the teacher participant raffle; and (e) a gift card for the research assistant.

All research assistants reported they successfully reminded principals and assistant principals to leave meeting rooms before conducting the survey at one of their school's scheduled faculty meeting. Research assistants reported they successfully distributed to each teacher a research packet containing the (a) informed consent agreement and instruction sheet as shown in Appendix E; (b) demographic survey instrument as shown in Appendix A; and (c) MBI-ES instrument. Three research assistants reported that several teachers opted not to complete the survey because they did not believe confidentiality would be maintained.

Sealed envelopes containing each school's completed surveys were collected from each school secretary within two days of their completion. Only after leaving the school premises were envelopes assigned a letter identifying their federal school report card label. The two improvement schools were assigned A and B and the nine adequate progress schools, C through K. From the total of 450 surveys collected from 11 schools, 291 teacher respondents whose demographic information satisfied criteria established by the study's independent and mediating variables, formed the sample population. Teacher respondents who were outside the scope of the study's criteria, and therefore eliminated from the sample population, included Kindergarten, First Grade, Special Education, and Speech teachers.

Data Analysis Preparation

Data were entered into an ASCII file using MS DOS editor. Upon completion of data entry, the text file was read into SPSS 14.0 for Windows[®] for analyses. Before data analyses, surveys were examined for missing or problematic data, the process of which is described now.

Teacher respondents who marked generalists on the demographic survey instrument were identified as teachers assigned to teach the high-stakes subject areas of reading and mathematics. Surveys from generalists for which no grade level was marked were eliminated before data analysis. Generalists who marked more than one grade level were identified as high-stakes grade level teachers if at least one of the grades they marked was grade 3 or grade 5. The determination was appropriate since the study identified both third and fifth grade as high-stakes (federal test-reporting) grade levels.

Teacher respondents who marked specialty area on the demographic survey instrument were identified as teachers assigned to teach the low-stakes subject areas of art, music, and physical education. Unlike the procedure followed for generalists, surveys completed by specialty area teachers for which no grade level was marked were not eliminated. Instead, their surveys were included among the sample population of low-stakes subject area teachers, since Research Questions 2, 5, and 8 addressed the mediating variable grade level taught in relation to high-stakes subject area teachers exclusively. Consequently, knowing the grade level taught for teacher respondents who had marked generalist was necessary to answer the subset of research questions; however, knowing the grade level of teacher respondents who had marked specialty area was not necessary.

Sample Population

The 291 teacher respondents selected for analyses satisfied the requirements of the study's categories of independent and mediating variables. The sample population represented second through fifth grade high-stakes and low-stakes subject area teachers working in 11 elementary schools whose administrators had agreed to the survey's administration at their sites. There were 48 teacher respondents from two improvement schools. There were 246 teacher respondents from nine adequate progress schools. The sample population represented 44% of the total number of high-stakes and low-stakes subject area teachers working in elementary schools within the district and 33% of the total population of elementary school teachers in the district. Discrepancies in degrees of freedom within the analyses were due to missing data.

To ascertain their subject area and grade level taught, the demographic survey instrument directed teacher respondents to identify themselves by their current teaching assignment. The sample population ($N = 291$) consisted of second through fifth grade elementary school teachers. For generalists, high-stakes subject area teachers, $n = 257$. For specialty area teachers, low-stakes subject area teachers, $n = 34$. For grades 3 and 5, high-stakes grade level teachers, $n = 134$. For grades 2 and 4, low-stakes subject area teachers, $n = 123$. The number of high-stakes subject area generalists represents 46% of the total elementary school population of high-stakes subject area teachers. The number of low-stakes subject area (specialty area) teachers represents 30% of the total elementary school population of low-stakes subject area teachers. Although the sample was not random, the number of respondents within each group of high-stakes and low-stakes subject area teachers was greater than 30, which assisted the ability to generalize results to the population of urban elementary school teachers.

Preliminary Analyses

The preliminary analyses section begins with reliability coefficient results from Cronbach's alpha testing. The section then presents descriptive statistics comparing means and standard deviations of the sample population in relation to normative data on teachers ($N = 4,163$) provided in the *MBI Manual* (Maslach et al., 1996). Also presented are means and standard deviations concerning burnout's subscales, emotional exhaustion, depersonalization, and personal accomplishment in relation to the study's independent variable subject area and the mediating variables grade level and report card label.

Cronbach's Alpha Testing

Within the study, internal consistency reliabilities for emotional exhaustion, depersonalization, and personal accomplishment estimated by Cronbach's alpha testing were .90 for emotional exhaustion, .74 for depersonalization, and .71 for personal accomplishment. The results are similar to those reported by Gold (1984) who reported Cronbach alpha estimates of .88, .74, and .72, respectively. The results were also similar to results of Iwanicki and Schwab (1981) whose reported estimates were .90, .76, and .76, respectively.

Descriptive Statistics: Normative Data

A comparison between normative data found in the *MBI Manual* (Maslach et al, 1996) and data from the sample population was conducted. Regarding the burnout subscale of emotional exhaustion, the mean score for the normed subgroup of teachers ($N = 4,163$) and the sample population ($N = 292$) were 21.25 and 23.46 respectively (see Table 8).

Table 8

Means and Standard Deviations for the MBI Subscales

	Emotional Exhaustion		Depersonalization		Personal Accomplishment	
	MBI	Sample	MBI	Sample	MBI	Sample
M	21.25	23.46	11.00	5.31	33.54	39.54
SD	11.01	11.54	6.19	5.32	6.89	5.81

Note. MBI population of teachers, $N = 4,163$ (Maslach et al, 1996, p. 8). Sample population, $N = 292$. Discrepancies in degrees of freedom are due to missing data.

The similarity between the means for emotional exhaustion prompted the conducting of the Welch t-test, which is used when “sample sizes are unequal and variances are heterogeneous” (Glass & Hopkins, 1996, p. 295). The Welch t-test for emotional exhaustion was statistically significant ($t_{329} = 3.17, p \leq .001$, with standard error = .70).

Low, average, and high burnout scores provided by the *MBI Manual* (Maslach et al., 1996, p. 6) were used to calculate frequencies related to the sample population of teacher respondents ($N = 294$). The range of experience burnout data was then calculated using normed data regarding the teacher ($N = 4,136$) subgroup (Maslach et al., 1996, p. 6). Results related to the range of experienced burnout will be used to report results to teacher respondents who request survey result information (see Table 9).

Table 9

Range of Experienced Burnout

	<u>Emotional Exhaustion</u>		<u>Depersonalization</u>		<u>Personal Accomplishment</u>	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Low	79	26.9	232	78.9	20	6.8
Average	112	38.1	29	9.9	61	20.7
High	103	35.0	32	10.9	211	71.8

Note. $N = 294$.

Based on results of experienced burnout as manifested by emotional exhaustion, 38.1% of teacher respondent scores reflected an average degree of burnout while 35% of teacher respondent scores reflected a high degree of burnout. Combined, 73% of the scores reflected average to high degrees of burnout as manifested by emotional exhaustion. By contrast, 27% reflected a low degree of emotional exhaustion.

Based on results of experienced burnout as manifested by depersonalization, 9.9% of teacher respondent scores reflected an average degree of burnout while 10.9% of teacher respondent scores reflected a high degree of burnout. Combined, 20.8% of the scores reflected average to high degrees of experienced burnout as manifested by depersonalization. By contrast, 78.9% reflected a low degree of depersonalization.

Based on results of experienced burnout as manifested by personal accomplishment, 20.7% of teacher respondent scores reflected an average degree of burnout while 6.8% of the scores reflected a high degree of burnout. (Extrapolations

reflect the MBI procedure whereby reported levels of personal accomplishment, rather than reduced personal accomplishment, are scored.) Combined, 27.5% of the scores reflected average to high degrees of experienced burnout as manifested by reduced personal accomplishment. By contrast 71.8% reflected a high degree of personal accomplishment.

Descriptive Statistics: Research Questions

The cross-sectional study addressed relationships between reported levels of burnout, as measured by the emotional exhaustion, depersonalization, and personal accomplishment subscales of the MBI-ES, and variables putatively related to increased workload demands and stress represented by academic subject area, grade level, and school report card label. Theoretically, subject area was considered an independent variable, while grade level and school report card label were considered mediating variables. The presentation of descriptive statistics is organized around three subsets of research questions. Each subset of research questions relates a burnout subscale to the independent and mediating variables. Table 10 presents the sample sizes associated with the variable categories used in the respective analyses of variance reported within this section.

Table 10

Research Question Subsets and Sample Population

Research Questions	Category	N = 291	
		High-stakes	Low-stakes
		Generalist	Specialty Area
1, 4, 7	Subject Area	257	34
2, 5, 8	Grade Level	134	123
3, 6, 9	Improvement	40	8
	Adequate Progress	217	26

Note. Degrees of freedom in the various analyses of variance may vary slightly from the sample sizes reported here due to missing data on individual scales for some respondents.

Research Questions 1, 4, and 7 addressed the relation of burnout and the independent variable, subject area. Teacher respondents, who identified themselves as generalists, were categorized as high-stakes subject area teachers because they are responsible for teaching reading and mathematics. Teacher respondents, who identified themselves as specialty area teachers, were categorized as low-stakes subject area teachers because they are responsible for teaching art, music, and physical education. Table 11 presents descriptive statistics related to Research Questions 1, 4, and 7.

Table 11

Burnout by Subject Area, Research Questions 1, 4, and 7

Subscale	Teacher	M	SD	<i>N</i> = 291
Emotional Exhaustion	HSSA	24.25	11.270	257
	LSSA	18.03	11.580	34
Depersonalization	HSSA	5.33	5.341	257
	LSSA	5.53	5.235	34
Personal Accomplishment	HSSA	39.82	5.687	257
	LSSA	38.38	6.679	34

Note. HSSA = high-stakes subject area. LSSA = low-stakes subject area.

Research Questions 2, 5, and 8 addressed the relation of burnout among high-stakes subject area teachers and grade level. Grade levels 3 and 5 were categorized as high-stakes grade levels, whereas grade levels 2 and 4 were categorized as low-stakes grade levels. Table 12 presents descriptive statistics related to Research Questions 2, 5, and 8.

Table 12

Burnout by High-Stakes Subject Area and Grade, Research Questions 2, 5, and 8

Subscale	Grades	M	SD	<i>N</i> = 257
Emotional Exhaustion	HSG	23.79	11.378	134
	LSG	24.76	11.175	123
Depersonalization	HSG	5.56	5.581	134
	LSG	5.07	5.077	123
Personal Accomplishment	HSG	40.01	5.182	134
	LSG	39.62	6.206	123

Note. HSG = Grades 3 and 5. LSG = Grades 2 and 4.

Research Questions 3, 6, and 9 examined burnout as a function of both subject area and identified federal report card labels. Schools labeled needing improvement were categorized as high-stakes labeled schools, while schools labeled adequate progress were categorized as low-stakes labeled schools. Table 13 presents descriptive statistics related to Research Questions 3, 6, and 9.

Table 13

Burnout by Subject Area and School Label, Research Questions 3, 6, and 9

Subscale	Label	SA	M	SD	N = 291
Emotional	IM	HS	25.18	12.70	40
		LS	13.63	8.93	8
Exhaustion	AP	HS	24.08	11.01	217
		LS	19.38	12.11	26
Depersonalization	IM	HS	4.83	4.49	40
		LS	5.88	5.79	8
	AP	HS	5.42	5.49	217
		LS	5.42	5.17	26
Personal	IM	HS	39.18	5.88	40
		LS	38.63	6.97	8
Accomplishment	AP	HS	39.94	5.66	217
		LS	38.31	6.73	26

Note. IM = improvement. AP = adequate progress. SA = Subject Area. HS = high-stakes subject area. LS = low-stakes subject area.

The preliminary analyses section presented reliability results related to Cronbach alpha testing. The section then presented descriptive statistics related to the comparison of the sample population to normative data on teacher burnout. Thereafter, the section

presented descriptive statistics related to the burnout subscales and the study's independent variable, subject area, and its mediating variables, grade level and report card label. The next section presents the analyses of research questions.

Analyses of Research Questions

The section concerning the analyses of research questions is organized as follows. First, the research questions are reintroduced. Next, for each subset of research questions, the following is presented: (a) a brief review of the questions within the subset; (b) results from major analyses conducted and description of salient results; (c) determinations regarding rejection of the null hypotheses; and (d) a table summarizing results from analyses of variance testing.

The research questions of the cross-sectional study focused on relationships between reported levels of burnout, as expressed in responses to the emotional exhaustion, depersonalization, and personal accomplishment subscales of the MBI-ES, and variables putatively related to increased workload demands and stress as a consequence of the passage of No Child Left Behind legislation:

1. What levels of emotional exhaustion are reported by teachers of high-stakes versus low-stakes subject areas?
2. How do the levels of emotional exhaustion reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4?
3. How do the levels of emotional exhaustion reported by teachers of high-stakes versus low-stakes subject areas change between improvement versus adequate progress schools?
4. What levels of depersonalization are reported by teachers of high-stakes versus low-stakes subject areas?

5. How do the levels of depersonalization reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4?

6. How do the levels of depersonalization reported by teachers of high-stakes versus low-stakes subject areas change between improvement versus adequate progress schools?

7. What levels of personal accomplishment are reported by teachers of high-stakes versus low-stakes subject areas?

8. How do the levels of personal accomplishment reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4?

9. How do the levels of personal accomplishment reported by teachers of high-stakes versus low-stakes subject areas change between improvement versus adequate progress schools?

Research Questions 1, 4, and 7

Research Questions 1, 4, and 7 examined the effects of subject area on the mean level of burnout, measured respectively by the MBI-ES subscales for emotional exhaustion, depersonalization, and personal accomplishment. A total of 291 teacher respondents, 257 high-stakes subject area teachers and 34 low-stakes subject area teachers, comprised the sample for these analyses.

Research Question 1

A one-factor analysis of variance was conducted to answer Research Question 1: What levels of emotional exhaustion are reported by teachers of high-stakes versus low-stakes subject areas? This analysis of variance had one between-subjects factor, Subject Area, high-stakes generalist teachers of reading and mathematics versus low-stakes specialty area teachers of art, music, and physical education teachers. In this analysis of

emotional exhaustion, the effect of Subject Area, $F(1, 289) = 9.10, p < .003$, was statistically significant. The mean for high-stakes subject area teachers was 24.05 whereas the mean for low-stakes subject area teachers was 18.03. Based on results for Research Question 1, null hypothesis H_{1_0} was rejected, and the alternative H_{1_A} was supported: There was a statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes versus low-stakes subject area teachers.

Upon rejection of null hypothesis H_{1_0} and in accordance with the research design of the study (see Figure 2), ANOVA and Pearson correlation tests were conducted to ascertain whether gender, age, and number of years teaching further influenced reported levels of emotional exhaustion. Preliminary analyses of demographic data found that two teacher respondents did not provide gender. Eleven teacher respondents did not provide age. Two teacher respondents did not provide number of years teaching (see Table 14).

Table 14

Sample Population by Gender, Age, Number of Years Teaching

Gender ($N = 292$)	
Female	234
Male	53
Age ($N = 283$)	
≤ 25	44
26-30	65
≥ 31	173
Years Teaching ($N = 292$)	
< 5	111
5-10	77
> 10	104

A one-factor analysis of variance was conducted to determine whether levels of emotional exhaustion changed between female and male teachers. This analysis of variance had one between-subjects factor, Gender (female versus male). In this analysis of emotional exhaustion, the effect of Gender was not statistically significant, $F(1, 289) = .80, p = .49$. Table 15 summarizes results related to the examination of emotional exhaustion in relation to gender.

Table 15

Analysis of Variance for Emotional Exhaustion by Gender

Source	<i>df</i>	<i>F</i>	<i>p</i>
Between Subjects			
Gender (G)	3	0.801	0.494
Within-group error	288	(106.88)	

Note. Value in parentheses represents mean square error.

To examine the possible influence of age and number of years teaching on emotional exhaustion, Pearson (2-tailed) correlations were conducted between (a) emotional exhaustion and age; and (b) emotional exhaustion and number of years teaching. Neither test showed significant correlations (see Table 16).

Table 16

Pearson Correlations on Emotional Exhaustion

		Age	Years Teaching	Emotional Exhaustion
Age	<i>r</i>	1	0.766**	0.002
	<i>p</i> (2-tailed)		0.000	0.980
	N	283		283
Years Teaching	<i>r</i>	0.766**	1	0.035
	<i>p</i> (2-tailed)	0.000		0.553
	N	282	292	292
Emotional Exhaustion	<i>r</i>	0.002	0.035	1
	<i>p</i> (2-tailed)	0.980	0.553	
	N	283	292	294

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

Research Question 4

A one-factor analysis of variance was conducted to answer Research Question 4: What levels of depersonalization are reported by teachers of high-stakes versus low-stakes subject areas? This analysis of variance had one between-subjects factor, Subject Area, high-stakes generalist teachers of reading and mathematics versus low-stakes specialty area teachers of art, music, and physical education teachers. In this analysis of

depersonalization, the effect of Subject Area, $F(1, 289) = .04, p = .84$. was not statistically significant. Based on results for Research Question 4, null hypothesis H_{40} was not rejected: There was no statistically significant difference in the mean depersonalization score for teachers of high-stakes versus low-stakes subject area teachers.

Research Question 7

A one-factor analysis of variance was conducted to answer Research Question 7: What levels of personal accomplishment are reported by teachers of high-stakes versus low-stakes subject areas? This analysis of variance had one between-subjects factor, Subject Area (coded as for Research Question 1). In this analysis of personal accomplishment, the effect of Subject Area was not statistically significant, $F(1, 289) = 1.84, p = .18$. Based on results for Research Question 7, null hypothesis H_{70} was not rejected: There was no statistically significant difference in the mean personal accomplishment score for teachers of high-stakes versus low-stakes subject area teachers. Table 17 summarizes analysis of variance results related to Research Questions 1, 4, and 7.

Table 17

Analysis of Variance for Burnout by Subject Area

Between-subjects Source	<i>df</i>	<i>F</i>	<i>p</i>
Emotional Exhaustion			
Subject Area (S)	1	9.10**	0.003
Within-group error	289	(127.82)	
Depersonalization			
Subject Area (S)	1	0.04	0.84
Within-group error	289	(28.40)	
Personal Accomplishment			
Subject Area (S)	1	1.84	0.18
Within-group error	289	(33.74)	

Note. Value in parentheses represents mean square error. ** $p < .01$

Analyses of Research Questions 1, 4, and 7 revealed a statistically significant effect of Subject Area for the burnout subscale emotional exhaustion only, with the mean score of teacher respondents of high-stakes subject areas greater than the mean score for teacher respondents of low-stakes subject areas. There was no statistically significant effect of Subject Area for the burnout subscales of depersonalization or personal

accomplishment. The next subsection presents results related to Research Questions 2, 5, and 8, which identified grade taught as a mediating variable with grades 3 and 5 categorized as high-stakes grade levels and grades 2 and 4 categorized as low-stakes grade levels.

Research Questions 2, 5, and 8

Research Questions 2, 5, and 8 identified grade level taught as a mediating variable. The research questions examined the effects of grade level on the mean level of burnout, measured respectively by the MBI-ES subscales of emotional exhaustion, depersonalization, and personal accomplishment. Grades 3 and 5 were categorized as high-stakes grade levels. Grades 2 and 4 were categorized as low-stakes grade levels. Low-stakes subject area teachers were not included for analyses in the subset of Research Questions 2, 5, and 8 since art, music, and physical education teachers teach multiple grade levels. A total of 257 teacher respondents, 134 high-stakes grade level teachers and 123 low-stakes grade level teachers, comprised the sample for these analyses. The results of Research Questions 2, 5, and 8 are now presented.

Research Question 2

A one-factor analysis of variance was conducted to answer Research Question 2: How does the level of emotional exhaustion reported by teachers of high-stakes stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4? This analysis of variance had one between-subjects factor, Grade Level, high-stakes grades 3 and 5 versus low-stakes grades 2 and 4. In this analysis of emotional exhaustion, the effect of Grade Level was not statistically significant, $F(1, 255) = .47, p = .49$. Based on results for Research Question 2, null hypothesis H_{20} was not rejected: There was no statistically significant difference in the mean emotional exhaustion score for teachers of

high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.

Research Question 5

A one-factor analysis of variance was conducted to answer Research Question 5: How does the level of depersonalization reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4? This analysis of variance had one between-subjects factor, Grade Level, high-stakes grades 3 and 5 versus low-stakes grades 2 and 4. In this analysis of depersonalization, the effect of Grade Level was not statistically significant, $F(1, 255) = .53, p = .47$. Based on results for Research Question 5, null hypothesis H_{50} was not rejected: There was no statistically significant difference in the mean depersonalization score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.

Research Question 8

A one-factor analysis of variance was conducted to answer Research Question 8: How does the level of personal accomplishment reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4? This analysis of variance had one between-subjects factor, Grade Level, high-stakes grades 3 and 5 versus low-stakes grades 2 and 4. In this analysis of personal accomplishment, the effect of Grade Level was not statistically significant, $F(1, 255) = .30, p = .58$. Based on results for Research Question 8, null hypothesis H_{80} was not rejected: There was no statistically significant difference in the mean personal accomplishment score for teachers of high-stakes subject areas in grade levels 3 and 5

versus teachers of high-stakes subject areas in grades 2 and 4. Table 18 summarizes analysis of variance results related to Research Questions 2, 5, and 8.

Table 18

Analysis of Variance of High-Stakes Subject Area Teachers by Grade Level

Between-subjects Source	<i>df</i>	F	<i>p</i>
Emotional Exhaustion			
Grade level (G)	1	0.47	0.49
Within-group error	255	(127.27)	
Depersonalization			
Grade level (G)	1	0.53	0.47
Within-group error	255	(28.58)	
Personal Accomplishment			
Grade level (G)	1	0.30	0.58
Within-group error	255	(32.43)	

Note. Value in parentheses represents mean square error.

No null hypotheses were rejected with respect to Research Questions 2, 5, and 8. Analyses of high-stakes subject area teacher responses revealed no statistically significant effect of Grade Level for the burnout subscales of emotional exhaustion, depersonalization, and personal accomplishment. The next subsection presents results

related to Research Questions 3, 6, and 9, which identified federal report card labels as another mediating variable. Needing improvement was categorized as a high-stakes label and adequate progress was categorized as a low-stakes label.

Research Questions 3, 6, and 9

Research Questions 3, 6, and 9 identified the federal report card label as a mediating variable. Needing improvement was categorized as a high-stakes label and adequate progress was categorized as a low-stakes label. There were 291 teacher respondents. Of 48 teacher respondents from high-stakes label, improvement, schools, 40 were high-stakes subject area teachers and eight were low-stakes. Of the 243 teacher respondents from low-stakes, adequate progress, schools, 217 were high-stakes subject area teachers and 26 were low-stakes. The results for Research Questions 3, 6, and 9 are now presented.

Research Question 3

A two-factor analysis of variance was conducted to answer Research Question 3: How do the levels of emotional exhaustion reported by teachers of high-stakes versus low-stakes subject areas change between improvement and adequate progress schools? This analysis of variance for emotional exhaustion was a two-factor between-subjects design with Subject Area, high-stakes versus low-stakes, crossed with Label, improving versus adequate progress. While the effects of Report Card Label, $F(1, 287) = .88, p = .35$, and the interaction between Subject Area and Label, $F(1, 287) = 1.90, p = .17$, were not statistically significant, the main effect of Subject Area, $F(1, 287) = 10.70, p < .001$, was statistically significant.

The mean for emotional exhaustion for high-stakes subject area teachers ($M = 24.63$) was higher than the corresponding mean for low-stakes subject area teachers ($M =$

16.50). The non-significant interaction may be interpreted as indicating that the preceding mean difference is consistent across Report Card Label. Based on results for Research Question 3, null hypothesis H_{3_0} was not rejected: There was no statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.

Research Question 6

A two-factor analysis of variance was conducted to answer Research Question 6: How do the levels of depersonalization reported by teachers of high-stakes versus low-stakes subject areas change between improvement and adequate progress schools? This analysis of variance for depersonalization was a two-factor between-subjects design with Subject Area, high-stakes versus low-stakes, crossed with Label, improving versus adequate progress. The effects of Subject Area, $F(1, 287) = .20, p = .65$, Report Card Label, $F(1, 287) = .00, p = .95$, and the interaction between Subject Area and Label, $F(1, 287) = .21, p = .67$ were not statistically significant. Based on results for Research Question 6, null hypothesis H_{6_0} was not rejected: There was no statistically significant difference in the mean depersonalization score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.

Research Question 9

A two-factor analysis of variance was conducted to answer Research Question 9: How do the levels of personal accomplishment reported by teachers of high-stakes versus low-stakes subject areas change between improvement and adequate progress schools? This analysis of variance for personal accomplishment was a two-factor between-subjects design with Subject Area, high-stakes versus low-stakes, crossed with Label, improving

versus adequate progress. The effects of Subject Area, $F(1, 287) = .73, p = .39$, Report Card Label, $F(1, 287) = .31, p = .86$, and the interaction between Subject Area and Label, $F(1, 287) = .18, p = .67$, were not statistically significant. Based on results for Research Question 9, null hypothesis H_0 was not rejected: There was no statistically significant difference in the mean personal accomplishment score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools. Table 19 summarizes results related to teachers of high-stakes versus low-stakes subject areas working in improvement and adequate progress schools.

Table 19

Analysis of Variance by Subject Area and Report Card Label

Between-subjects	<i>df</i>	F	<i>p</i>
Source			
Emotional Exhaustion			
Subject Area (S)	1	10.70**	0.001
Label (L)	1	0.88	0.35
S X L	1	1.90	0.17
Within-group error	287	(127.86)	
Depersonalization			
Subject Area (S)	1	0.20	0.65
Label (L)	1	0.00	0.95
S X L	1	0.21	0.67
Within-group error	287	(28.55)	
Personal Accomplishment			
Subject Area (S)	1	0.73	0.39
Label (L)	1	0.31	0.86
S X L	1	0.18	0.67
Within-group error	287	(33.91)	

Note. Value in parentheses represents mean square error.

As noted in the presentation of results for Research Question 3, the mean for emotional exhaustion for high-stakes subject area teachers ($M = 24.63$) was higher than the corresponding mean for low-stakes subject area teachers ($M = 16.50$). The non-significant interaction may be interpreted as indicating that the preceding mean difference is consistent across Report Card Label.

Summary

The purpose of the quantitative cross-sectional study was to compare the differences in the reported levels of burnout between second through fifth grade high-stakes and low-stakes subject area teachers working in a large urban elementary school district in Arizona. The study examined the influence of the independent variable, subject area taught, and the mediating variables, grade level taught and report card label, on the dependent variable burnout, as manifested by three subscales: emotional exhaustion, depersonalization, and personal accomplishment. Based on results, there was a statistically significant difference in levels of emotional exhaustion reported by high-stakes versus low-stakes subject area teachers. The mean for high-stakes subject area teachers ($M = 24.25$) was higher than the corresponding mean for low-stakes subject area teachers ($M = 18.03$). Analyses between emotional exhaustion and demographics on gender, age, and years teaching showed no significant correlations. The results of the study are now summarized according to each group of research questions and their concomitant hypotheses.

Null Hypotheses 1, 4, and 7

Research Question 1 asked: What levels of emotional exhaustion are reported by teachers of high-stakes versus low-stakes subject areas? Based on results for Research Question 1, null hypothesis $H1_0$ was rejected and alternative $H1_A$ was supported. There

was a statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes versus low-stakes subject areas.

Research Question 4 asked: What levels of depersonalization are reported by teachers of high-stakes versus low-stakes subject areas? Based on results, null hypothesis H_{4_0} was not rejected. There was no statistically significant difference in the mean depersonalization score for teachers of high-stakes versus low-stakes subject area teachers.

Research Question 7 asked: What levels of personal accomplishment are reported by teachers of high-stakes versus low-stakes subject areas? Based on results, the null hypothesis H_{7_0} was not rejected. There was no statistically significant difference in the mean personal accomplishment score for teachers of high-stakes versus low-stakes subject area teachers.

Null Hypotheses 2, 5, and 8

Research Question 2 asked: How do the levels of emotional exhaustion reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4? Based on results, null hypothesis H_{2_0} was not rejected. There was no statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.

Research Question 5 asked: How do the levels of depersonalization reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4? Based on results, null hypothesis H_{5_0} was not rejected. There was no statistically significant difference in the mean depersonalization score for teachers of

high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.

Research Question 8 asked: How do the levels of personal accomplishment reported by teachers of high-stakes subject areas change between grade levels 3 and 5 versus grade levels 2 and 4? Based on results, null hypothesis H_{8_0} was not rejected. There was no statistically significant difference in the mean personal accomplishment score for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grades 2 and 4.

Null Hypotheses 3, 6, and 9

Research Question 3 asked: How do the levels of emotional exhaustion reported by teachers of high-stakes versus low-stakes subject areas change between improvement versus adequate progress schools? Based on results, null hypothesis H_{3_0} was not rejected. There was no statistically significant difference in the mean emotional exhaustion score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.

Research Question 6 asked: How do the levels of depersonalization reported by teachers of high-stakes versus low-stakes subject areas change between improvement versus adequate progress schools? Based on results, null hypothesis H_{6_0} was not rejected. There was no statistically significant difference in the mean depersonalization score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.

Research Question 9 asked: How do the levels of personal accomplishment reported by teachers of high-stakes versus low-stakes subject areas change between improvement versus adequate progress schools? Based on results, null hypothesis H_{9_0}

was not rejected. There was no statistically significant difference in the mean personal accomplishment score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.

The salient point derived from the results involves Research Question 1, which pertained to the independent variable, subject area, and the dependent variable subscale, emotional exhaustion: What levels of emotional exhaustion are reported by teachers of high-stakes versus low-stakes subject areas? Results showed that there was significant difference in emotional exhaustion among high-stakes versus low-stakes subject area teachers. Consequently, the concomitant hypothesis was rejected. Analysis of variance tests results pertaining to gender and emotional exhaustion showed there was no significant difference in the mean emotional exhaustion scores for male and female teachers. Age and number of years teaching, likewise, showed no significant influence. The implications of the results will be discussed in Chapter 5.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

Chapter 5 summarizes the study that examined the No Child Left Behind high-stakes testing work environment in relation to the psychological syndrome of burnout as manifested by emotional exhaustion, depersonalization, and reduced personal accomplishment. The chapter begins with a précis of the problem that influenced the study's purpose and design. Salient points on burnout theory and No Child Left Behind legislation reiterate the justification used to support the need for a cross-sectional study that addressed teacher burnout in the No Child Left Behind elementary school workplace. Discussion of the study's limitations and a review of the research questions and their concomitant hypotheses is followed by a discussion of ethical implications derived from the study. Thereafter follows recommendations for future research that may benefit teachers and consequently, students within the No Child Left Behind high-stakes testing environment.

Summary of the Purpose

The primary purpose of the cross-sectional study was to compare the differences in the reported levels of burnout between second through fifth grade high-stakes and low-stakes subject area teachers working in a large urban elementary school district in Arizona. Impetus for the study was concern that No Child Left Behind high-stakes testing mandates calling for proficiency in reading and mathematics by 2014 had generated a crisis in public education greater than the current teacher shortage crisis. The new crisis concerned the possible existence of burnout caused by federal accountability mandates that placed greater workload demands on reading and mathematics teachers at specific test-reporting grade levels. Some, not all, teachers had ostensibly become high-stakes subject area and high-stakes grade level teachers. Questions emerged whether these high-

stakes teachers suffered the job-related stressors of burnout at greater levels than their low-stakes counterparts teaching art, music, and physical education. If so, the achievement gap would possibly widen because of the very legislation instituted to close it, since burnout impedes job performance.

The study utilized the MBI-ES, one of several MBI instruments recognized for their strong validity and reliability. Second through fifth grade high-stakes and low-stakes subject area teachers from elementary schools were selected as the sample population because studies had indicated the majority of teachers reporting dissatisfaction, lowered morale, and stress were elementary school teachers. Comparing high-stakes subject area teachers in test-reporting grades 3 and 5 with teachers in grades 2 and 4 helped determine whether burnout levels varied further dependent upon grade level taught. Examining differences in burnout levels reported by high-stakes versus low-stakes subject area teachers in schools labeled improvement versus adequate progress helped determine whether burnout levels varied further dependent upon federal report card labels mandated by No Child Left Behind legislation.

Burnout and No Child Left Behind

The review of literature supported the study's conceptualization of the interface of the No Child Left Behind high-stakes testing workplace environment with burnout's two theoretical frameworks, the three-subscale, and the newer, six areas of mismatch framework. The review of burnout theory first described the three-subscale psychological syndrome whose symptoms interfere with the cognitive processes necessary for optimal job performance. Teachers suffering from emotional exhaustion experience symptoms of strain, stress, work overload, and hopelessness. Teachers suffering from depersonalization become cynical towards and disinterested in their students. Teachers

suffering from reduced personal accomplishment experience a diminished sense of competence and a loss of belief in their ability to make a difference in the lives of their students. Researchers have disagreed whether the three components interact sequentially or separately. However, researchers have agreed that emotional exhaustion seems to be the key component with some (Koeske & Koeske, 1989; Shirom, 1989) contending that emotional exhaustion is the essence of burnout with depersonalization and reduced personal accomplishment only related variables. Furthermore, researchers have agreed that burnout impedes job performance.

In addition to three-subscale framework, the literature review discussed the newer framework involving six areas of job and person mismatch that lead to burnout: work overload, lack of reward, lack of control, lack of fairness, lack of community, and value conflict. The review explained how the six areas of mismatch currently exist within the public education workplace generated by No Child Left Behind legislation. Ultimately, the review demonstrated a ramification associated with an extant burnout crisis among high-stakes subject area teachers: the widening of the achievement gap caused by the legislation instituted to close it.

Limitations of Study

Generalizability of results of the study to the population of teachers is limited by the nature of the cross-sectional survey whose data was collected at one place and point in time. However, because of the attention given to the selection of a district representative of urban elementary school districts in Arizona, the results of the research are probably generalizable to the population of second through fifth grade teachers working in urban elementary school districts. Additionally, the size of the sample population yielded more than 30 teacher respondents for all but two of 11 variable cells,

that of low-stakes subject area teachers assigned to schools with improvement ($n = 8$) or adequate progress ($n = 26$) labels. The single cell containing only eight teacher respondents should not interfere with generalizing to the identified population, since there were no significant findings related to the mediating variable, school label, regardless of sample size.

Because of the self-reporting nature of the MBI-ES instrument there is the potential for response bias. The survey's questions required rigorous honesty that teachers might not have utilized especially when some questions involved admitting to negative feelings related to their students and their personal competence, questions related to depersonalization and personal accomplishment, respectively. The possibility that teachers responded by marking answers representing their ideal, versus true, feelings may be mitigated somewhat by Cronbach's alpha estimates of reliability generated by the study, which were consistent with those reported in previous research.

Discussion of the Research Questions

The research sought to determine whether No Child Left Behind's disproportionately distributed workload demands had predisposed high-stakes subject area teachers to greater levels of burnout than their low-stakes counterparts. Accordingly, research questions were developed to examine differences in reported levels of emotional exhaustion, depersonalization, and personal accomplishment in relation to high-stakes versus low-stakes subject area teachers. Additional research questions were developed to examine the possible effects of mediating variables related to grade level taught and report card label earned. Research Questions 1, 2, and 3 related to the burnout subscale of emotional exhaustion. Research Questions 4, 5, and 6 related to the burnout subscale of depersonalization. Research Questions 7, 8 and 9 related to the burnout subscale of

reduced personal accomplishment. A brief review of salient findings from each group of research questions is followed by a discussion of the relevant subscale, namely, emotional exhaustion, depersonalization, and reduced personal accomplishment, in relation to No Child Left Behind.

Research Question 1

Research Question 1 examined levels of emotional exhaustion reported by teachers of high-stakes versus low-stakes subject areas. The MBI-ES subscale for emotional exhaustion measured the responses of 291 teacher respondents. The mean score of high-stakes subject area teachers was 24.25. The mean score of low-stakes subject area teachers was 18.03. A one-way analysis of variance showed subject area taught had a positive influence on emotional exhaustion. Consequently, the null hypothesis was rejected because there was a statistically significant difference ($p < .003$) in the mean emotional exhaustion scores for teachers of high-stakes versus low-stakes subject areas.

Research Question 2

Research Question 2 examined how the levels of emotional exhaustion reported by teachers of high-stakes subject areas changed between grade levels 3 and 5 versus grade levels 2 and 4. The MBI-ES subscale for emotional exhaustion measured the responses of 257 teacher respondents. The mean score of high-stakes subject area teachers in grades 3 and 5 was 23.79. The mean score of high-stakes subject area teachers in grades 2 and 4 was 24.76. A one-factor analysis of variance indicated that grade level taught had no mediating affect on the emotional exhaustion reported by high-stakes subject area teachers. Consequently, the null hypothesis was not rejected because there

was no statistically significant difference in the mean emotional exhaustion scores for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grade levels 2 and 4.

Research Question 3

Research Question 3 examined how the levels of emotional exhaustion reported by teachers of high-stakes versus low-stakes subject areas changed between improvement versus adequate progress schools. The MBI-ES subscale for emotional exhaustion measured the responses of 291 teacher respondents. The mean score of high-stakes subject area teachers in improvement schools was 25.18. The mean score of high-stakes subject area teachers in adequate progress schools was 24.08. The mean scores of low-stakes subject area teachers in improvement schools was 13.63. The mean score of low-stakes subject area teachers in adequate progress schools was 19.38. A two-factor analysis of variance did not show report card label to have a mediating effect. Consequently, the null hypothesis was not rejected because there was no statistically significant difference in the mean emotional exhaustion scores for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.

Emotional Exhaustion and No Child Left Behind

Findings from Research Question 1 demonstrated that high-stakes subject area teachers are at greater risk for suffering burnout's emotional exhaustion symptoms than their low-stakes counterparts. Reading and mathematics teachers responded to MBI-ES subscale questions on emotional exhaustion relating to feeling strained, stressed, hopeless, and overloaded by work demands. Their responses produced findings that converged with studies in which teachers reported feeling increased pressures from

workload demands and reduced morale (Abrams et al., 2003; Moon, et al., 2003; Sunderman et al., 2004).

Findings related to Research Question 1 validated the efficacy of the study's conceptualization (recall Figure 1) that interfaced burnout's three-subscale and six areas of mismatch frameworks within the No Child Left Behind workplace. The conceptualization illustrated emotional exhaustion interfaced with work overload and value conflict, the dissonance that occurs in teachers when they implement practices in ways that deviate from what they believe is appropriate. Findings suggest that No Child Left Behind high-stakes testing mandates have placed reading and mathematics teachers at greater risks of suffering the debilitating effects of emotional exhaustion, which has been identified as a key burnout component by some (Maslach et al., 1996), and by others (Koeske & Koeske, 1989; Shirom, 1989), the essence of burnout.

It seems reasonable to expect that the high number (73%) of teachers reporting average to high levels of emotional exhaustion, among them reading and mathematics teachers, would concern district leaders responsible for satisfying federal mandates requiring incremental increases in high-stakes test results. Reading and mathematics teachers are the very teachers who need to be functioning at optimal cognitive levels: They are the teachers charged with helping students pass No Child Left Behind high-stakes tests. Although burned-out teachers may remain in their classrooms instead of succumbing to physical ailments and absenteeism (Cheek, 2003; Maslach et al., 1996), the cognitive failure associated with burnout (Linden et al, 2005) may render them incapable of delivering effective instruction, particularly if they are forced to implement

school or districtwide testing practices that conflict with their personal values (Evers et al., 2002; Moon et al., 2003).

Support for the null hypothesis of Research Question 2 may be inconclusive for several reasons. Findings from Research Question 2 demonstrated that high-stakes subject area teachers are at greater risk of reporting emotional exhaustion than their low-stakes counterparts regardless of grade level taught. The findings diverge from research showing teachers assigned to test-reporting grade levels reported, more often, reduced morale, feeling overburdened, and altering teaching practices (Stecher & Barron, 2001), characteristics similar to the job and person mismatch areas associated with emotional exhaustion, namely, work overload and value conflict (Maslach & Leiter, 1997; Maslach et al., 2001).

A possible explanation for divergence as well as failure to reject the null hypothesis comes from Arizona's implementation of a dual reporting system, one addressing state test-reporting criteria, and the other, federal criteria. A consequence of the dual reporting system is that students from all grades are tested under AZ Learns. Whether teaching in grades 2, 3, 4, or 5, high-stakes subject area is the dominating force. That grade level did not mediate the reported levels of emotional exhaustion among high-stakes grade level teachers is, therefore, a logical outcome. Whether state or federally mandated, the pressure to satisfy high-stakes testing mandates is most likely indistinguishable to the high-stakes subject area teachers charged with preparing students sufficiently enough to demonstrate they are performing adequately, where performing is an AZ Learns state term and adequately, a No Child Left Behind federal term.

Support for the null hypothesis of Research Question 3 may be inconclusive for several reasons. Findings from Research Question 3 demonstrated that high-stakes subject area teachers are at a greater risk of reporting emotional exhaustion than their low-stakes counterparts regardless of the report card label their school receives. The impetus for Research Question 3 originated from recommendations in the *MBI Manual* (Maslach et al., 1996) calling for studies that might provide confirmatory information about burnout's impact on service quality. If schools labeled failing had revealed higher levels of reported burnout for any of the burnout subscales, confirmatory information would have been demonstrated. However, findings failed to reveal a significant difference in the reported burnout levels among teachers in schools labeled improvement versus adequate progress schools.

The difference in the number of adequate progress versus improvement schools, nine versus two, respectively, may have skewed the results. However, an alternative possibility is that the assumption of one label being more demanding and high stakes than another was, itself, faulty. No Child Left Behind mandates render both labels, improvement and adequate progress, high-stakes labels: Reading and mathematics teachers face the high-stakes testing pressure to reach adequate progress, maintain adequate progress, or regain adequate progress should test scores indicate the need for improvement.

The Center on Education Policy (2006) noted that, nationwide, the majority of improvement schools and districts are located in urban districts. Their findings are supported by the classification of the Desertside School District, which is classified as an improvement district since, collectively, its schools have not satisfied federal mandates.

The Center on Education Policy also noted that schools labeled as needing improvement vary from year to year. This finding is also supported by situations within the district under study. Some schools had recently satisfied adequate progress goals and had, therefore, moved out of improvement. Other schools had not satisfied their goals and had, therefore, moved into their first year of improvement. Moving in and out of improvement represents a strain on teachers when considering the serious sanctions schools face should they fail to move out of improvement for several years (No Child Left Behind Act of 2001, 2002). It seems reasonable, therefore, to contend that the stress experienced by reading and mathematics teachers who worry their schools might not be able to reach adequate progress is comparable to the stress of those worrying about maintaining or regaining adequate progress.

Research Question 4

Research Question 4 examined the levels of depersonalization reported by teachers of high-stakes versus low-stakes subject areas. The MBI-ES subscale for depersonalization measured the responses of 291 teacher respondents. The mean score of high-stakes subject area teachers was 5.33. The mean score of low-stakes subject area teachers was 5.53. A one-way analysis of variance indicated subject area taught had no significant influence on reported levels of depersonalization. Consequently, the null hypothesis was not rejected because there was no statistically significant difference in the mean depersonalization scores for teachers of high-stakes versus low-stakes subject area teachers.

Research Question 5

Research Question 5 examined how the levels of depersonalization reported by teachers of high-stakes subject areas changed between grade levels 3 and 5 versus grade levels 2 and 4. The MBI-ES subscale for depersonalization measured the responses of 257 teacher respondents. The mean score of high-stakes subject area teachers of grades 3 and 5 was 5.56. The mean score of high-stakes subject area teachers in grades 2 and 4 was 5.07. A one-way analysis of variance indicated that grade level taught did not have a mediating affect on the depersonalization scores reported by high-stakes subject area teachers. Consequently, the null hypothesis was not rejected because there was no statistically significant difference in the mean depersonalization scores for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grade levels 2 and 4.

Research Question 6

Research Question 6 examined how the levels of depersonalization reported by teachers of high-stakes versus low-stakes subject areas changed between improvement versus adequate progress schools. The MBI-ES subscale for depersonalization measured the responses of 291 teacher respondents. The mean score of high-stakes subject area teachers in improvement schools was 4.83. The mean score of high-stakes subject area teachers in adequate progress schools was 5.42. The mean scores of low-stakes subject area teachers in improvement schools was 5.88. The mean score of low-stakes subject area teachers in adequate progress schools was 5.42. A two-way analysis of variance showed report card label and grade level taught did not have a significant influence on reported levels of depersonalization. Consequently, the null hypothesis was not rejected

because there was no statistically significant difference in the mean depersonalization scores for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.

Depersonalization and No Child Left Behind

Support for the three null hypotheses associated with depersonalization may be inconclusive for several reasons. The results demonstrated convergence with researchers who have argued that emotional exhaustion is the essential and exclusive burnout component (Koeske & Koeske; Shirom, 1989). Results also converge with findings from the cross-sectional study of urban and rural teachers (Abel and Sewell, 1999) that found average to high levels of emotional exhaustion in both urban and rural teachers but low levels of depersonalization. Finally, results converge with findings from the cross-sectional study of burnout in relation to national reform measures in the Netherlands (Evers et al., 2002), which found there were no significant findings related to depersonalization's negative attitudes towards students.

When examining the study's conceptualization of the interface of the three subscale and six areas of job and person mismatch (recall Figure 1), depersonalization subsumes value conflict, lack of control, and lack of community. Value conflict was justified within the subset of research questions related to emotional exhaustion, leaving lack and control and lack of community as the remaining areas. Not all areas of job and person mismatch are necessary for burnout to manifest in the workplace (Maslach et al, 2001), providing a plausible explanation for the failure to reject any of the null hypotheses related to depersonalization. However, another plausible explanation may come, in part, from elementary school teachers' reluctance to allow high-stakes testing

pressures to negatively influence their relationship with their preadolescent, innocent, students. High-stakes elementary school teachers may consciously work to control their classroom environments and to preserve the sense of community within their classrooms even as No Child Left Behind mandates exert legislated pressures that threaten their autonomy.

Another plausible explanation for the lack of reported depersonalization concerns trust. During the training of research assistants, several trainees expressed concern for school anonymity. In spite of reassurance that data would be aggregated by schools collectively rather than individually, two research assistants expressed concern that some teachers (actual numbers were not provided) did not trust the confidentiality agreement and may not have answered the survey's questions truthfully. One assistant wrote her concerns in a note. All concerns essentially involved the belief that district administration would secure information specific to school sites. Mistrust, though outwardly expressed by only a few teacher respondents may have affected response bias regarding questions related to teacher attitudes towards students. If mistrust existed, it is reasonable to believe teachers would be reluctant to report negative feelings towards students, thus influencing their honesty regarding depersonalization questions.

A final explanation for the lack of significant levels of depersonalization is the possibility that low depersonalization scores demonstrate the care indicative of the teaching vocation. Teacher care for students may not diminish because of high-stakes testing pressures, but rather, increase along with resistance to change initiatives (Ackerman & Mackenzie; 2006). Moreover, faced with high-stakes testing pressures, teachers may also increase their commitment to educate the whole child (Eisner, 2005;

Kohn, 2005; Noddings, 2005) in the tradition of Dewey (1938/1997), who once cautioned against believing that knowledge was something to “ladle out in doses” (p. 82). More recently, Berube (2004) cautioned: “If we are not careful, we could become a nation of people who score high on standardized tests but who cannot understand, analyze, and evaluate what we have truly learned” (p. 267).

Although null hypotheses concerning depersonalization were rejected and possible explanations for the rejections have been provided, frequencies data related to reported depersonalization scores warrant further discussion of the subscale. Farber (1984) held that examining frequencies data provided useful information lost by the examination of burnout means. Farber held that only by examining frequencies would interesting data on large minorities of teachers be accessible. Applying Farber’s recommendation revealed large minorities of teachers suffering from depersonalization (see Table 9). For example, out of 294 teachers surveyed, 61 teachers (21.8%) scored in the average to high range of experienced depersonalization, 29 and 32, respectively. The numbers become disturbing when holding to Farber’s (1991) contention that even small numbers of burned-out teachers can have a negative influence on school operations.

Research Question 7

Research Question 7 examined the levels of personal accomplishment reported by teachers of high-stakes versus low-stakes subject areas. The MBI-ES subscale for personal accomplishment measured the responses of 291 teacher respondents. The mean score of high-stakes subject area teachers was 39.82. The mean score of low-stakes subject area teachers was 38.38. The personal accomplishment subscale is scored in the opposite direction of emotional exhaustion and depersonalization. High scores on the

personal accomplishment subscale reflect a low, rather than high degree of burnout.

Average levels of reduced personal accomplishment are reflected in scores ranging from 36 to 31. Scores lower than 31 reflect high levels of reduced personal accomplishment. A one-way analysis of variance indicated subject area taught had no significant influence on reported levels of personal accomplishment. Consequently, the null hypothesis was not rejected because there was no statistically significant difference in the mean personal accomplishment scores for teachers of high-stakes versus low-stakes subject area teachers.

Research Question 8

Research Question 8 examined how the levels of personal accomplishment reported by teachers of high-stakes stakes subject areas changed between grade levels 3 and 5 versus grade levels 2 and 4. The MBI-ES subscale for personal accomplishment measured the responses of 257 teacher respondents. The mean score of high-stakes subject area teachers was 40.01. The mean score of low-stakes subject area teachers was 36.62. A one-way analysis of variance indicated that grade level taught did not have a mediating affect on the personal accomplishment scores reported by high-stakes subject area teachers. Consequently, the null hypothesis was not rejected because there was no statistically significant difference in the mean depersonalization scores for teachers of high-stakes subject areas in grade levels 3 and 5 versus teachers of high-stakes subject areas in grade levels 2 and 4.

Research Question 9

Research Question 9 examined how the levels of personal accomplishment reported by teachers of high-stakes versus low-stakes subject areas changed between

improvement versus adequate progress schools. The MBI-ES subscale for personal accomplishment measured the responses of 291 teacher respondents. The mean score of high-stakes subject area teachers in improvement schools was 39.18. The mean score of high-stakes subject area teachers in adequate progress schools was 39.94. The mean scores of low-stakes subject area teachers in improvement schools was 38.63. The mean score of low-stakes subject area teachers in adequate progress schools was 38.31. A two-way analysis of variance showed subject area and report card label did not have a significant effect on reported levels of personal accomplishment. Consequently, the null hypothesis was not rejected because there was no statistically significant difference in the mean personal accomplishment score for teachers of high-stakes versus low-stakes subject areas in improvement versus adequate progress schools.

Reduced Personal Accomplishment and No Child Left Behind

Support for the three null hypotheses associated with personal accomplishment may be inconclusive for two reasons, one of which has already been discussed, mistrust in the confidentiality of the survey results that may have inhibited teacher honesty. The second reason relates to the study's conceptualization of burnout's three-subscale and six areas of mismatch frameworks interfaced within the No Child Left Behind workplace. When examining the interface of the three subscales and six areas of job and person mismatch, reduced personal accomplishment subsumes each of the six areas: work overload, value conflict, lack of control, lack of community, lack of reward, and lack of fairness. Not all areas of job and person mismatch are necessary for burnout to manifest in the workplace (Maslach et al, 2001). However, that failure to reject any of the null hypotheses related to personal accomplishment suggests that no area of job and person

mismatch exists is unlikely, since rejection of the null hypothesis for Research Question 1 provided evidence of the interface of emotional exhaustion with work overload and value conflict

A plausible explanation for failure to reject any of the null hypotheses related to the personal accomplishment subscale involves resiliency, which was described in Chapter 1 as an integral characteristic of engagement on the burnout continuum. Findings from studies (Patterson, 2004; Sumsion, 2003) have suggested that certain factors positively influence resilience and enable educators to overcome personal dissatisfaction and nonsupportive work conditions. Factors include self-insight, awareness, determination, leadership, and problem-solving skills. When considering contextual factors, findings from studies (Patterson et al., 2004; Sumsion, 2003) suggested support networks, mentoring or being mentored, and quality professional development positively influenced resilience.

Resiliency provides a plausible explanation for the failure to reject null hypotheses related to personal accomplishment. Resiliency may be strong enough to help teachers sustain high efficacy levels in the No Child Left Behind high-stakes testing workplace. However, sources of possible resiliency among the sample population of teachers remain unclear. A variety of unknown contextual factors operating within each of the 11 elementary schools may have fostered resiliency

Even though null hypotheses concerning personal accomplishment were rejected and possible explanations for the rejections have been provided, frequencies data related to reported personal accomplishment scores warrant further discussion of the subscale for the same reasons given for null hypotheses related to depersonalization. To reiterate,

Farber (1984) held that using frequencies rather than means to report group scores facilitated the accessibility of interesting data on large minorities of teachers. Applying Farber's recommendation revealed large minorities of teachers suffering from reduced personal accomplishment (see Table 9). For example, out of 294 teachers surveyed, 81 teachers (27.5%) scored in the average and high ranges of reduced personal accomplishment, 61 and 20, respectively. As with depersonalization, the numbers, though small, become problematic when considering even small numbers of burned out teachers can have a negative influence on school operations (Farber, 1991). The next section offers recommendations for future research ideas generated by the study of teacher burnout in the No Child Left Behind high-stakes testing workplace.

Recommendations for Future Research

The following recommendations for future research are based on findings from the quantitative cross-sectional study that demonstrated a significant difference in levels of emotional exhaustion reported by high-stakes versus low-stakes subject area teachers:

1. Researchers (Sumsion, 2003; Strümpfer, 2003; Patterson et al., 2004) have called for further studies into the mechanisms and processes that contribute to resiliency. Fryer (2004), who rightly contends that positive workplace atmospheres may be foundational to organizational well being, recommends research that explores environments that promote positive attributes like resilience. The pervasiveness of No Child Left Behind legislation in the workplace makes it advisable for researchers to conduct mixed-method burnout studies whereby teacher respondents reporting high levels of personal accomplishment are interviewed. Data mining scripted interviews may reveal patterns that offer insight into the factors contributing to teacher resilience against burnout.

2. Cross-sectional studies of teacher burnout using the general survey, MBI-GS, seem appropriate. The MBI-GS “defines burnout as a crisis in ones’ relationship with work, not necessarily as a crisis in one’s relationship with people at work” (Maslach et al., 1996, p. 20). Consequently, the MBI-GS represents a valuable instrument in the examination of burnout among teachers in relation to their No Child Left Behind workplace rather than their students.

Care for children seems an especially reasonable explanation for low levels of reported depersonalization in the age of No Child Left Behind accountability, where teachers have reported feelings of stress and dissonance related to altering their teaching practices (Abrams et al., 2003; Boaler, 2003; Clarke et al., 2003). There may be teachers, who resist change (Ackerman & Mackenzie, 2006) on behalf of their students and their learning needs. For these reasons, the MBI-GS may be the better tool for determining levels of depersonalization. Administration of the MBI-GS, followed by interviews with teachers identified with average to high burnout levels, may provide insight into the exact nature of teacher burnout in the No Child Left Behind workplace. The qualitative component may verify or refute the possibility that teacher care for students negatively correlates to depersonalization.

3. The failure to reject null hypotheses related to the mediating variable grade level may have been due, in part, to Arizona’s use of a dual reporting system that monitors state as well as federal accountability. Consequently, all grade level teachers are responsible for administering high-stakes subject area tests, with grades 3, 5, 8, and 10 high-stakes (federal-reporting) grade levels. A mixed-method study could possibly add clarity to results of future burnout studies. Interviewing teachers concerning their

attitudes about state and federal testing mandates may reveal important findings concerning stressors related to a dual accountability system in which schools can literally be performing by state standards yet failing by federal standards.

4. According to Maslach et al. (1996), studies concerning burnout intervention are few in spite of the regularity with which they are recommended. Maslach et al. cite cost and logistic problems among the factors limiting such studies. Problematic factors notwithstanding, as long as the stress and workload demands of high-stakes testing mandates continue, intervention studies, such as the Cheek et al. (2003) study on music therapy and burnout should be considered.

Ethical Implications

Burned-out teachers in the classroom are less effective in fulfilling their contractual obligations, making teacher burnout a veritable crisis in the age of No Child Left Behind high-stakes testing. Surely, teachers must perform at optimal levels if they are to prepare students to pass federally-mandated high-stakes tests and earn scores that signify adequate progress. For teachers working in urban schools, the responsibility is even more urgent, since No Child Left Behind expects them to fulfill the legislation's primary goal to close the achievement gap, a goal whose attainment has been, to date, as illusive as its importance. The implications of burnout existing in the No Child Left Behind high-stakes testing workplace should alert education leaders to develop and implement plans to (a) determine if teachers are suffering from burnout, and (b) address the needs of those identified with burnout.

The study met its goal to fill a gap in research. Previous findings had revealed high-stakes accountability testing influenced increased stress and lowered morale among teachers, but had not yet revealed whether reported symptoms signaled the more

dangerous psychological symptoms of burnout. The results of the study on No Child Left Behind high-stakes testing and teacher burnout advance the importance of examining the burnout levels of teachers, those charged with making a difference in lives of the nation's youth. The study advances a call to action on the part of education leaders, be they school, district, teacher association, or teacher leaders. A call to action seems reasonable when a burnout crisis in education has been verified. Findings showed that a majority of reading and mathematics teachers working in urban schools, the schools where children of the achievement gap get their education, are suffering significant levels of burnout's emotional exhaustion.

Findings suggest that education leaders must address the needs of the teachers who, rather than quit, remain in the No Child Left Behind high-stakes testing workplace. While some teachers may be coping, others are suffering from the debilitating symptoms of burnout. As long as the call for "mean accountability" (Hess, 2003) continues, education leaders will find it prudent to measure, not just the test scores of students, but the burnout scores of teachers. Teachers are, after all, the individuals who make the difference, not just because they help students pass tests, but because they help students experience and love learning. Furthermore, education leaders may find it advisable to question the impact No Child Left Behind high-stakes testing is having on burnout in students as well as teachers: whether they are becoming emotionally exhausted from the strain of high-stakes testing; whether they will deride rather than value their public school experience; and whether they will lose faith in their ability to attain their too-high-stakes diplomas and, ultimately, shun rather than pursue life-long learning.

Summary of Results

The research questions and hypotheses of the cross-sectional study concerned the relationship between the dependent variable, burnout; the independent variable, subject area taught; and the mediating variables, grade level taught and report card label earned. Data from the study revealed a significant relationship between high-stakes subject area and the burnout subscale, emotional exhaustion, which is considered a key component of the burnout syndrome by some (Maslach et al., 1996) and the essence of burnout by others (Koeske & Koeske, 1989; Shirom, 1989). Findings from the study converge with researchers who have argued that emotional exhaustion is the essence of burnout.

References

- Abel, M., & Sewell, J. (1999, May/June). Stress and burnout in rural and urban secondary school teachers. *Journal of Educational Research*, 92(5). Retrieved October 7, 2003, from EBSCOhost database.
- Abrams, L. M., & Madaus, G.F. (2003, November). The lessons of high-stakes testing. *Educational Leadership*, 61(3), 31-35.
- Abrams, L., Pedulla, J., & Madaus, G. (2003, Winter). Views from the classroom: Teachers' opinions of statewide testing programs (1). *Theory into Practice* 42(1), 18-29. Retrieved September 6, 2003, from ProQuest database.
- Ackerman, R., & Mackenzie, S. (2006, may). Uncovering teacher leadership. *Educational Leadership*, 63(8), 66-80.
- Amrein, A. L., & Berliner, D. C. (2002, March 28). *High-stakes testing, uncertainty, and student learning*. Retrieved on May 22, 2003, from Educational Policy Analysis Archives: <http://epaa.asu.edu/epaa/v10n18/>
- Anderson, D., & Anderson, A. L. (2001). *Beyond change management*. San Francisco: Jossey-Bass/Pfeiffer.
- Arizona Department of Education. (2003, June 5). *State of Arizona consolidated state application accountability workbook*. Retrieved July 29, 2004, from the Arizona Department of Education Web site: <http://ade.state.az.us/azlearns/workbook.asp>
- Arizona Department of Education. (2003-2004). *Adequate yearly progress report card*. (2003–2004). Retrieved October 16, 2004, from Arizona Department of Education Web site: <http://ade.state.az.us/azlearns/>

Arizona Department of Education. (2003-2004). *2003-2004 State report card: A message from Tom Horne*. Phoenix, AZ: Research and Evaluation.

Arizona Department of Education. (2004). *School AYP determinations 2003–2004*.

Retrieved November 21, 2004, from Arizona Department of Education,

Accountability Division, Research and Evaluation Section:

<http://ade.state.az.us/profile/publicview/aypschoollist.asp>

Arizona Department of Education. (2004a, June). *2003-2004 enrollments by county, gender and ethnicity*. Retrieved November 21, 2004, from Arizona Department of Education, Accountability Division, Research and Evaluation Section:

<http://www.ade.state.az.us/researchpolicy/azenroll/2003->

[2004/2004CountyByGenderRace_all.pdf](http://www.ade.state.az.us/researchpolicy/azenroll/2003-2004/2004CountyByGenderRace_all.pdf)

Arizona Department of Education. (2004b, June). *2003-2004 enrollments by school and grades*. Retrieved November 21, 2004, from Arizona Department of Education, Accountability Division, Research and Evaluation Section:

<http://www.ade.state.az.us/researchpolicy/azenroll/2003-2004/Default.asp>

Arizona Department of Education. (2005). *Arizona's accountability systems: 2005 NCLB and AZ Learns* [PowerPoint presentation]. Retrieved May 12, 2006, from

<http://www.ade.state.az.us/azlearns/AccountabilitySystems/2005/2005AZ%20LEARNNS-NCLBWorkshopPresentation.ppt>

Arizona Department of Education. (2005, November 1). *Standards-based teaching and learning: Academic K-12 standards*. Retrieved December 1, 2005 from

<http://www.ade.state.az.us/standards/contentstandards.asp>

Arizona Department of Education. (2005, November 1). *School/Dist/AZ report cards*.

Retrieved December 2, 2005 from

http://www.ade.az.gov/srcs/find_school.asp?rdoYear=2005

Aspey, S. (2005, April 20). *Statement by press secretary on NEA's action regarding*

NCLB [Press release]. Retrieved May 8, 2005, from U.S. Department of Education

Web site: <http://www.ed.gov/news/pressreleases/2005/04/04202005.html>

Association of Community Organizations for Reform Now (ACORN). (2003, May 21).

Leaving teachers behind: How a key requirement of the No Child Left Behind Act

(Putting a highly qualified teacher in every class) has been abandoned. Retrieved

November 11, 2004, from <http://www.acorn.org/index.php?id=327>

Concept definition: Internal validity. (1998). Retrieved April 30, 2006, from Athabasca

University Center for Psychology Web site:

<http://psych.athabascau.ca/html/Validity/concept.shtml>

Ayres, R., Schalock, M., & Rudd, A. (2002, May 15). *Patterns and relationships among*

teacher beliefs, perceptions of context, and responses to the context. Oregon-QAT

Title-II Initiative. Retrieved October 4, 2003, from Western Oregon University

Teaching Research Division: www.tr.wou.edu/tep/Brief11.pdf

Bakker, A., Demerouti, E., & Schaufeli, W. (2002, September). Validation of the

Maslach Burnout Inventory-A General Survey: An Internet study. *Anxiety, Stress &*

Coping 15(3). Retrieved September 28, 2003, from EBSCOhost database.

Bandura, A. (1986). Self-efficacy beliefs in human functioning. In *Social Foundations of*

Thought and Action. Retrieved April 12, 2004, from

<http://www.emory.edu/EDUCATION/mfp/effpassages.html>

- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, 1998). Retrieved April 12, 2004, from Stanford University online Web site: <http://www.emory.edu/EDUCATION/mfp/effpage.html>
- Barton, P.E. (2006, February). The dropout problem: Losing ground. *Educational Leadership*, 63(5), 14-18.
- Bate, P., Khan, R., & Pye, A. (2000, March/April). Towards a culturally sensitive approach to organization structuring: Where organization design meets organizational development. *Organization Science: A Journal of the Institute of Management Sciences*, 11(2), 197.
- Berliner, D., & Biddle, B. (1995). *The manufactured crisis*. Reading, MA: Addison-Wesley.
- Berube, C. (2004, July/August). Are standards preventing good teaching? *Clearing House*, 77(6), 264-267. Retrieved October 6, 2004, from EBSCOhost database.
- Bloomfield, D., & Cooper, B. (2003, May). NCLB: A new role for the federal government. *Technological Horizons in Education*, 30(10), S6-S9. Retrieved September 1, 2003, from ProQuest database.
- Boaler, J. (2003, March). When learning no longer matters: Standardized testing and the creation of inequality. *Phi Delta Kappan*, 84(7), 502-506.
- Bolick, C. (2003, April/May). School choice. *American Enterprise*, 14(2), 31-33. Retrieved May 19, 2004, from EBSCOhost database.

- Bracey, G. (2006, May). How to avoid statistical traps. *Educational Leadership*, 63(8), 78-82.
- Bracey, G. W., & Molnar, A. (2003, February). *Recruiting, preparing and retaining high quality teachers: An empirical synthesis*. Retrieved May 11, 2006 from Arizona State University, Education Policy Studies Laboratory at College of Education Web site: <http://www.asu.edu/educ/epsl/EPRU/documents/EPSTL-0302-102-EPRU.doc>
- Brady, R. (2003, January). *Can failing schools be fixed?* Retrieved October 6, 2004, from Thomas B. Fordham Foundation Web site:
http://www.edexcellence.net/library/failing_schools/failingschools.html
- Brown, C. (2002, March). *Opportunities and accountability to leave no child behind in the middle grades: An examination of the No Child Left Behind Act of 2001*. Retrieved November 14, 2004, from the Edna McConnell Clark Foundation Web site: www.emcf.org/pdf/student_2001nochildleftbehindanalysis.pdf
- Brown v. Board of Educ., 347 U.S. 484 (1954) [Electronic excerpt]. Retrieved December 11, 2004, from <http://ourdocuments.gov/doc.php?flash=true&doc=87>
- Bryant, R. M., & Constantine, M. G. (2006, April). Multiple role balance, job satisfaction, and life satisfaction in women school counselors. *Professional School Counseling*, 9(4), 265-271.
- Byrne, B. (1993, September). The Maslach Burnout Inventory: Testing for factorial validity and invariance across elementary, intermediate and secondary teachers. *Journal of Occupational & Organizational Psychology*, 66(3). Retrieved September 28, 2003, from EBSCOhost database.

- Center on Education Policy. (2006, March). *From the Capital to the Classroom: Year 4 of the No Child Left Behind Act*. Retrieved May 11, 2006, from <http://www.cep-dc.org/NCLB/Year4/Press/>
- Cheek, J.R., Bradley, L. J., Parr, G., & Lan, W. (2003, July). Using music therapy techniques to treat teacher burnout. *Journal of Mental Health Counseling, 25*(3), 204-217. Retrieved May 11, 2006, from ProQuest database.
- Cherniss, C. (1980). *Staff burnout: Job stress in the human services*. Newbury Park, CA: Sage.
- Cherniss, C. (1997). Teacher empowerment, consultation, and the creation of new programs in schools. *Journal of Educational & Psychological Consultation, 8*(2), p135-152.
- Clarke, M., Shore, A., Rhoades, A., Abrams, L., Miao, J., & Li, J. (2003, January). *Perceived effects of state-mandated testing programs on teaching and learning: Findings from interviews with educators in low-, medium-, and high-stakes states* (Boston College, Lynch School of Education). Retrieved November 11, 2004, from the National Board on Educational Testing and Public Policy Web site: <http://www.bc.edu/research/nbetpp/reports.html>
- Coleman, J.S., Campbell, E.Q., Hobson, C.J., McPartland, J., Mood, A.M., Weinfeld, F.D., & York, R.L. (1966). *Equality of educational opportunity*. Washington, DC: U.S. Government Printing Office.
- Concept definition: Internal validity*. (1998). Retrieved April 30, 2006, from Athabasca University Center for Psychology Web site: <http://psych.athabascau.ca/html/Validity/concept.shtml>

- Cone, J. D., & Foster, S. L. (2001). *Dissertations and theses from start to finish*. Washington, D.C.: American Psychological Association.
- Cooper, D. R., & Schindler, P. S. (2002). *Business research methods* (8th ed.). Boston: Irwin.
- Cordes, C., & Dougherty, T. (1993). A review and an integration of research on job burnout. *Academy of Management Review* 18(4), 621-656. Retrieved October 6, 2004, from EBSCOhost database.
- Creswell, J. W. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Pearson.
- Darling-Hammond, L. (2003, May). Keeping good teachers: Why it matters, what leaders can do. *Educational Leadership*, 58(8), 7.
- Davis, R.G. (1961, February 19). A man must suffer to be whole [Book review]. Retrieved October 15, 2004, from *The New York Times* Web site: <http://partners.nytimes.com/books/>
- DeMarris, K.B., & LeCompte, M.D. (1999). *The way schools work: A sociological analysis of education* (3rd ed.). New York: Addison Wesley Longman.
- Denver's characters: Federico Peña*. (n.d.) Retrieved December 18, 2004, from Denver.gov Web site: http://www.denver.gov.org/AboutDenver/history_char_pena.asp
- Dewey, J. (1938/1997). *Experience and education*. New York: Touchstone Books. EBSCOhost [Online collection]. (2005).
- Education Trust. (2004, October). *Measured progress: States are moving in the right direction in narrowing achievement gaps and raising achievement for all students*,

- but not fast enough*. Retrieved October 17, 2004, from <http://www2.edtrust.org/edtrust/>
- Eisner, E. (2005, September). Back to the whole. *Educational Leadership*, 63(1), 14-18.
- Elementary and Secondary Education Act of 1965, 20 § 236–244 (1965).
- Elmore, R.F. (2003, November). A plea for strong practice. *Educational Leadership*, 61(3), 6-10.
- Evers, W., Brouwers, A., & Tomic, W. (2002, June). *Burnout and self-efficacy: A study on teachers' beliefs when implementing an innovative educational system in the Netherlands*. Retrieved September 25, 2003, from EBSCOhost database.
- Farber, B. A. (1984, July/August). Stress and burnout in suburban teachers [Electronic version]. *Journal of Educational Research*, 77(6), 325-331.
- Farber, B. (1991). *Crisis in education: Stress and burnout in the American teacher*. San Francisco: Jossey-Bass.
- Farber, B.A. (2000a, May). Introduction: Understanding and treating burnout in a changing culture. *Journal of Clinical Psychology*, 56(5), 589-594.
- Farber, B. A. (2000b, May). Treatment strategies for different types of teacher burnout. *Journal of Clinical Psychology*, 56(5), 675-689.
- Farber, B., & Ascher, C. (1991, July). *Urban school restructuring and teacher burnout*. (Eric/Cue Digest, 75). New York: Clearing House on Urban Education, Teachers College, Columbia University. (ERIC Document Reproduction Service No. ED340812)
- Finn, C. (2002, September 6). *The effectiveness of "Teach for America" and other under-certified teachers on student academic achievement: A case of harmful public*

- policy*. Education Policy Analysis Archives. Retrieved September 16, 2003, from <http://www.edexcellence.net./gadfly/v02/gadfly35.html#review1>
- Finn, C. Jr., & Kanstoroom, M. (2000, Summer). Improving, empowering, dismantling. *Public Interest*, 140, 64-73. Retrieved June 27, 2003, from ProQuest database.
- Finneran, K. (Ed.). (2002-2003, Winter). Testy about testing [Editorial]. *Issues in Science and Technology*, 19,(2), 41-42. Retrieved April 9, 2003 from ProQuest database.
- Fore III, C., Martin, C., & Bender, W. (2002, October/November). Teacher burnout in special education: The causes and the recommended solutions. *High School Journal*, 86(1). Retrieved October 6, 2004, from EBSCOhost database.
- Freudenberger, H. J. (1974). Staff burnout [Electronic version]. *Journal of Social Issues*, 30(1), 159-165.
- Freudenberger, H. J., & Richelson, G. (1980). *Burn-out. The high cost of high achievement*. Garden City, NY: Anchor Press.
- Friedman, I.A. (1991, July/August). High-and low-burnout schools: School culture aspects of teacher burnout. *Journal of Educational Research*, 84(6), 325-331. Retrieved October 15, 2004, from EBSCOhost database.
- Friedman, I. A. (1995, May/June). Student behavior patterns contributing to teacher burnout. *Journal of Educational Research* 88(5), 281-289. Retrieved October 15, 2004, from EBSCOhost database.
- Friedman, I. (2000, May). Burnout in teachers: Shattered dreams of impeccable professional performance. *Journal of Clinical Psychology*, 56(5), 595-606. Retrieved July 2, 2004, from EBSCOhost database.

- Friedman, I. A., & Farber, B.A. (1992, September/October). Professional self-concept as a predictor of teacher burnout. *Journal of Educational Research*, 86(1), 28-35.
Retrieved October 15, 2004, from EBSCOhost database.
- Fryer, B. (2004, February). Accentuate the positive. *Harvard Business Review*, 82(2), 22-23. Retrieved July 8, 2005, from EBSCOhost database.
- Fuchs, L. S. & Fuchs, D. (1986, Spring). Curriculum-based assessment of progress toward long-term and short-term goals [Electronic version]. *Journal of Special Education*, 20(1), 69-82.
- Glass, G.V., & Hopkins, K.D. (1996). *Statistical methods in education and psychology*, 3rd ed. Needham Heights, MA: Allyn & Bacon.
- Gleason, B. (2004, November 22). ASCD adopts positions on high-stakes testing and the achievement gap. *ASCD Conference News*. Retrieved November 25, 2004, from <http://www.ascd.org/cms/index.cfm?TheViewID=2380&topnav=1>
- Goals 2000: Educate America Act*. (1994, March 21). Retrieved December 18, 2004, from U.S. Department of Education Archives:
<http://www.ed.gov/legislation/GOALS2000/TheAct/index.html>
- Gold, Y. (1984, Spring). Burnout: A major problem for the teaching profession. *Education* 104(3), 271. Retrieved July 2, 2004, from ProQuest database.
- Gold, Y. (1984). The factorial validity of the Maslach Burnout Inventory in a sample of California elementary and junior high school classroom teachers [Electronic version]. *Educational and Psychological Measurement*, 44, 1009-10016.
- Gold, Y. (1985). The relationship of six personal and life history variables to standing on three dimensions of the Maslach Burnout Inventory in a sample of elementary and

- junior high school teachers [Electronic version]. *Educational and Psychological Measurement*, 45, 377-387.
- Gold, Y. (1985). Does teacher burnout begin with student teaching. *Education*, 105(3), 255-257. Retrieved October 15, 2004, from EBSCOhost database.
- Gold, Y., & Bachelor, P. (1988, Summer). Signs of burnout are evident for practice teachers during the teacher training period [Electronic version]. *Education*, 108(4), 546-555.
- Goldstein, J., & Noguera, P. (2006, March). A thoughtful approach to teacher evaluation. *Educational Leadership*, 63(6), 31-36.
- Greene, G. (1961). *A burnt-out case*. New York: Viking Press.
- Gruenert, S. (2000). Shaping a new school culture. *Contemporary Education*, 71(2). Retrieved January 26, 2004, from ProQuest database.
- Gunzenhauser, M. (2003, Winter). High-stakes testing and the default philosophy of education. *Theory into Practice*, 42(1), 51-58. Retrieved October 23, 2004, from ProQuest database.
- Hancock, C. (2003, Summer). October 2, 2003. An examination of preservice teaching intensity in relation to in-service teacher retention and attrition. *Journal of Research in Music Education*, 51(2), 166. Retrieved October 2, 2003, from EBSCOhost database.
- Harvey, J. (2003, November). The matrix reloaded. *Educational Leadership*, 61(3), 19-21.
- Hess, F. (2003, November). The case of being mean. *Educational Leadership*, 61(3), 22-26.

- Hess, F. (2004, Spring). Reforming reform: An excerpt from common sense reform. *Harvard Graduate School of Education, HGSE News*. Retrieved August 1, 2004, from <http://gseweb.harvard.edu/news/features/hess08012004.html>
- Hock, R. (1988, Summer). Professional burnout among public school teachers. *Public Personnel Management*, 17(2), 167. Retrieved July 2, 2004, from ProQuest database.
- Hodgkinson, H. (2002, December). Grasping demographics: Get ready for them now. *Education Digest*, 68(4), 4-7. Retrieved November 9, 2004, from EBSCOhost database.
- Hodgkinson, H. (2003, April). *Leaving too many children behind: A demographer's view on the neglect of America's youngest children*. Retrieved December 18, 2004, from Institute for Educational Leadership Web site: <http://www.iel.org/pubs/manychildren.pdf>
- Hofmeister, A., & Lubke, M. (1990). *Research into practice: Implementing effective teaching strategies*. Boston: Allyn & Bacon.
- Hughes, R. (2001, March). Deciding to leave but staying: Teacher burnout, precursors and turnover. *International Journal of Human Resource Management*, 12(2), 288-298. Retrieved September 25, 2003, from EBSCOhost database.
- Inman, D., & Marlow, L. (2004, Summer). Teacher retention: Why do beginning teachers remain in the profession? *Education*, 124(4), 605-614. Retrieved May 3, 2006, from EBSCOhost database.
- Iwanicki, E.F., & Schwab, R. L. (1981). A cross-validated study of the Maslach Burnout Inventory. *Educational and Psychological Measurement*, 41, 1167-1174.

- Juhasz, A. (1990, Winter). A Teacher self-esteem: a triple-role approach to this forgotten dimension, *Education, 111*(2), 234-241. Retrieved October 6, 2004, from EBSCOhost database.
- Kaufhold, J. A., & Johnson, L. R. (Summer, 2005). The analysis of the emotional intelligence skills and potential problem areas of elementary educators. *Education, 125*(4), 615-626. Retrieved May 10, 2006, from EBSCOhost database.
- Kenyeri, N.T. (2002). Teacher attrition: A comparison study between teacher burnout and low and high socio-economic status schools. (Doctoral dissertation, Loyola University, 2002). Retrieved September 19, 2003, from *ProQuest Dissertations and Theses* database.
- Koeske, G.F., & Koeske, R.D. (1989). Construct validity of the Maslach Burnout Inventory: a critical review and reconceptualization [Electronic version]. *Journal of Applied Behavioral Science, 25*(2), 131-144.
- Kohn, A. (2005, September). Unconditional teaching. *Educational Leadership, 63*(1), 20-24.
- Ku, I., & Plotnick, R. (2003, February). Do children from welfare families obtain less education? *Demography, 40*(1), 151-170. Retrieved September 11, 2003, from ProQuest database.
- Kyriacou, C. (1987, June). Teacher stress and burnout: An international review. *Educational Research, 29*(2), 146-152.
- Lee, R.T., & Ashforth, B. E. (1993). A further examination of managerial burnout: Toward an integrated model. *Journal of Organizational Behavior, 14*, 3-20.

- Linden, D., Keijsers, G., Eling, P., & Schaijk, R. (2005, January). Work stress and attentional difficulties: An initial study on burnout and cognitive failures. *Work & Stress, 19*(1), 23-26. Retrieved May 13, 2006, from EBSCOhost database.
- Luekens, M.T., Lyter, D.M., & Fox, E.E. (2004). *Teacher attrition and mobility: Results from the teacher follow-up survey, 2000–01* (NCES 2004–301). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.
- Mandel, S. (2006, March). What new teachers really need. *Educational Leadership, 63*(6), 66-69.
- Marchese, T. (1992, November/December). Hearing faculty voices [editorial]. *Academic Search Premier, 24*(6), 4. Retrieved October 6, 2004, from EBSCOhost database.
- Maslach, C. (1976). Burned out [Electronic version]. *Human Behavior, 5*, 16-22.
- Maslach, C., & Jackson, S. E. (1981). *Maslach Burnout Inventory Manual*. Palo Alto, CA: CPP, Inc.
- Maslach, C., & Jackson, S. (1981). The measurement of experienced burnout [Electronic version]. *Journal of Occupational Behavior, 2*, 99-113.
- Maslach, C., Jackson, S., & Leiter, M. (1996). *Maslach Burnout Inventory Manual*. (3rd ed.). Palo Alto, CA: CPP, Inc.
- Maslach, C., & Leiter, M.P. (1997). *The truth about burnout: How organizations cause personal stress and what to do about it*. San Francisco: Jossey-Bass.
- Maslach, C., & Pines, A. (1977). The burnout syndrome in the day care setting [Electronic version]. *Child Care Quarterly, 6*, 100-113.

- Maslach, C., Schaufeli, W.B., & Leiter, M.P. (2001). Job burnout. *Annual Review of Psychology*, 52(1), 397-422. Retrieved October 4, 2005, from EBSCOhost database.
- Mathison, S., & Freeman, M. (2003, September 24). Constraining elementary teachers' work: Dilemmas and paradoxes created by state mandated testing. *Education Policy Analysis Archives*, 11(34). Retrieved September 19, 2003, from <http://epaa.asu.edu/epaa/v11n34/>.
- Mearns, J., & Cain, J. (2003, March). Relationships between teachers' occupational stress and their burnout and distress: Roles of coping and negative mood regulation expectancies. *Anxiety, Stress & Coping* 16(1), 71. Retrieved July 2, 2004, from EBSCOhost database.
- Meltzoff, J. (1998). *Critical thinking about research*. Washington, DC: American Psychological Association.
- Mitchell, N. (2004, October 21). Peña cites crisis, issues challenge: Summit on Latino academics conveys a sense of urgency. *Rocky Mountain News*. Retrieved December 1, 2004, from <http://www.rockymountainnews.com>
- Moon, T. R., Callahan, C. M., & Tomlinson, C. A. (2003, April 28). Effects of state testing programs on elementary schools with high concentrations of student poverty-good news or bad news? *Current Issues in Education*, 6(8). Retrieved November 9, 2004, from <http://cie.ed.asu.edu/volume6/number8/>
- Nathan, N. (2002, April). The human face of the high-stakes testing story. *Phi Delta Kappan*, 83(8), 595. Retrieved September 10, 2003, from ProQuest database.

- National Board for Professional Teaching Standards. (2003, March 10). *Fields of certification*. Retrieved December 1, 2005, from <http://www.nbpts.org/candidates/guide/whichcert/01EarlyChild2004.html>
- National Clearinghouse for English Language Acquisition and Language Instruction Education Programs. (2004, August). *Arizona rate of LEP growth from 1992-2003*. Retrieved November 21, 2004, from http://www.ncela.gwu.edu/policy/states/arizona/03_demo.htm
- The National Commission on Excellence in Education. (1983, April). *A nation at risk: The imperative for educational reform*. Retrieved October 2, 2004, from U.S. Department of Education Web site: <http://www.ed.gov/pubs/NatAtRisk/>
- National Conference of State Legislators. (2005, February). *Task force on No Child Left Behind: Final report*. Retrieved May 11, 2006, from http://www.ncsl.org/programs/educ/nclb_report.htm
- National Education Association. (2005). *Attracting and keeping quality teachers*. Retrieved October 30, 2005, from National Education Association Web site: <http://www.nea.org/teachershortage/index.html>
- National Education Association. (2005). *Statements about Pontiac v. Spellings*. Retrieved May 3, 2005, from National Education Association Web site: <http://www.nea.org/lawsuit/statements.html>
- National Education Association. (2006). Stand up for children: *Pontiac v. Spellings*. Retrieved May 13, 2006, from National Education Association Web site: <http://www.nea.org/lawsuit/index.html>

- Neuman, W. L. (2003). *Social research methods* (5th ed.). Upper Saddle River, NJ: Prentice Hall.
- No Child Left Behind Act of 2001, Pub. L. 107-110, 20 U.S.C. § 6301 *et seq.* (2002) (enacted). Retrieved October 14, 2004, from <http://www.ed.gov/policy/elsec/leg/esea02/107-110.pdf>
- Noddings, N. (2005, September). What does it mean to educate the whole child. *Educational Leadership*, 63(1), 8-13.
- Nummela, R. (1982, Fall). The number of teacher adaptations can predict burnout. *Education*, 103(1), 79. Retrieved October 6, 2004, from EBSCOhost database.
- Orlich, D. C. (2004, September/October). No child left behind. An Illogical accountability model. *Clearing House*, 78(1), 6-11. Retrieved May 15, 2006, from EBSCOhost database.
- Owens, R. G. (2004). *Organizational behavior in education: Adaptive leadership and school reform* (8th ed.). New York: Allyn & Bacon.
- Pai, Y., & Adler, S.A. (2001). *Cultural foundations of education* (3rd ed.). Upper Saddle River, NJ: Merrill/Prentice-Hall.
- Pahnos, M.L. (1990, Fall). The principal as the primary mediator of school stress. *Education*, 111(1). Retrieved October 6, 2004, from EBSCOhost database.
- Paige, R. (2003, September 24). *Education in America: The complacency must end* [Webcast speech]. Retrieved October 4, 2003, from U.S. Department of Education Web site: <http://www.ed.gov/news/speeches/2003/09/09242003.html>
- Pedulla, J., Abrams, L., Madaus, G., Russell, M., Ramos, M., & Miao, J. (2003, March). *Perceived effects of state-mandated testing programs on teaching and learning:*

- Findings from a national survey of teachers.* Boston College, Lynch School of Education. Retrieved November 11, 2004, from The National Board on Educational Testing and Public Policy Web site: <http://www.bc.edu/research/nbetpp/reports.html>
- Perreault, G. (2000, Summer). The classroom impact of high-stress testing. *Education, 120*(4), 705-710. Retrieved September 26, 2004, from ProQuest database.
- Patterson, J. H.; Collins, L., & Abbott, G. (2004, March). A study of teacher resilience in urban schools. *Journal of Instructional Psychology, 31*(1), (3–11). Retrieved July 8, 2005, from EBSCOhost database.
- Pines, A., & Maslach, C. (2002, May). Teacher burnout: A psychodynamic existential perspective. *Teachers & Teaching, 8*(2), 121-140. Retrieved September 25, 2003, from EBSCOhost database.
- Popham, J. (2004, September). Why assessment illiteracy is professional suicide. *Educational Leadership, 62*(1), 82-83.
- ProQuest* [Online collection]. (2006).
- ProQuest Dissertations and Theses* [Online collection]. (2006).
- Ravitch, D. (2003). *The language police: How pressure groups restrict what students know.* New York: Knopf.
- Reivich, K., & Shatte, A. (2002). *The resilience factor.* New York: Broadway Books.
- Rhodes, C., Nevill, A., & Allan, J. (2004, May.) Valuing and supporting teachers: A survey of teacher satisfaction, dissatisfaction, morale and retention in an English local education authority. *Research in Education, 71*, 67-80. Retrieved May 3, 2006, from EBSCOhost database.

- Riley, R. (2002, September). What matters most? *American School Board Journal*, 189(9). Retrieved November 15, 2004, from ASBJ Online Web site:
<http://www.asbj.com/2002/09/0902coverstory3.html>
- Roelofs, J., Verbraak, M., Keijsers, G. P., De Bruin, M.B. N., & Schmidt, A.J. (2005, February). Psychometric properties of a Dutch version of the Maslach Burnout Inventory General Survey (MBI-DV) in individuals with and without clinical burnout. *Stress & Health: Journal of the International Society for the Investigation of Stress*, 21(1), 17-25. Retrieved May 11, 2006, from EBSCOhost database.
- Rothstein, R. (2004, November). The achievement gap: A broader picture. *Educational Leadership*, 62(3), 40 – 43.
- Sanders, R. (1999, November). Exploring obstacles to educational reform: Observations from finding a way. *Professional Geographer*, 51(4), 578. Retrieved October 6, 2004, from EBSCOhost database.
- Saporito, S. (2003, May). Private choices, public consequences: Magnet school choice and segregation by race and poverty. *Social Problems*, 50(2), 181-203.
- School District of the City of Pontiac v. Margaret Spellings, No. 05-71535 (E.D. Mich. Nov. 23, 2005).
- School District of the City of Pontiac v. Secretary of the United States Department of Education, No. 05-2708 [amici curiae] (6th. Ct. App. March 31, 2006).
- School District of the City of Pontiac v. Secretary of the United States Department of Education, No. 05-2708 [amicus curiae] (6th. Ct. App. March 31, 2006).
- Schaufeli, W.B., Bakker, A.B., Hoogduin, K., Schaap, C., & Kladler, A. (2001). On the clinical validity of the Maslach Burnout Inventory and the Burnout Measure.

- Psychology & Health*, 16 (5), 565-582. Retrieved December 21, 2004, from EBSCOhost database.
- Scherer, M. (2000, May). Keeping teaching fresh [Perspective]. *Educational Leadership* 57(8), 7.
- Schwab, R. (1983, Winter). Teacher burnout: Moving beyond 'psychobabble' [Electronic version]. *Theory into Practice* 22(1), 21-26.
- Schwab and Iwanicki. (1982). Perceived role conflict, role ambiguity, and teacher burnout [Electronic version]. *Educational Administration Quarterly*, 18, 60-74.
- Schwarzer, R., Schmitz, Gerdamarie, S., & Tang, C. (2000, August). Teacher burnout in Hong Kong and Germany: A cross-cultural validation of the Maslach Burnout Inventory. *Anxiety, Stress & Coping*, 13(3). Retrieved September 28, 2003, from EBSCOhost database.
- Selye, H. (1976). *The stress of life* [Revised ed.]. New York: McGraw-Hill.
- Sergiovanni, T. J. (2000). *The lifeworld of leadership: Creating culture, community, and personal meaning in our schools*. San Francisco: Jossey-Bass.
- Shirom, A. (1989). Burnout in work organizations. In C.L. Cooper & I. Robertson (Eds.), *International Review of Industrial and Organizational Psychology* (pp. 25-48). New York: Wiley.
- Short, P. M., & Greer, J. T. (2002). *Leadership in empowered schools: Themes from innovative efforts* (2nd ed.). Upper Saddle River, NJ: Merrill/Prentice-Hall.
- Smethem, L., & Adey, K. (2005, August). Some effects of statutory induction on the professional development of newly qualified teachers: a comparative study of pre-

- and post-induction experiences [Electronic version]. *Journal of Education for Teaching*, 31(3), 187-200.
- Smith, F. (1986). *Insult to intelligence*. Portsmouth, NH: Heinemann Educational Books.
- Spellings, M. (2005, April 7). Raising achievement: A new path for No Child Left Behind [Speech]. Retrieved August 22, 2005, from U.S. Department of Education Web site: <http://www.ed.gov/news/speeches/2005/04/04072005.html>
- Starnaman, S. (1992, January). A test of a causal model of communication and burnout in the teaching profession. *Communication Education* 41(1), 40-53. Retrieved October 6, 2004, from EBSCOhost database.
- State of Arizona consolidated state application accountability workbook*. (2003, June 5). Retrieved July 29, 2004, from the Arizona Department of Education Web site: <http://ade.state.az.us/azlearns/workbook.asp>
- Stecher, B., & Barron, S. (2001, October). Unintended consequences of test-based accountability when testing in "milepost" grades. *Educational Assessment*, 7(4), 259-281. Retrieved October 6, 2004, from EBSCOhost database.
- Strümpfer, D.J.W. (2003, May). Resilience and burnout: A stitch that could save nine. *South African Journal of Psychology*, 33(2), 69-79. Retrieved July 8, 2005, from EBSCOhost database.
- Sumsion, J. (2003, June). 'Bad days don't kill you; they just make you stronger': A case study of an early childhood educator's resilience. *International Journal of Early Years Education*, 11(2), 141-154. Retrieved July 8, 2005, from EBSCOhost database.

- Sunderman, G. L., & Orfield, G. (2006, February). The unraveling of No Child Left Behind: How negotiated changes transform the law. Retrieved May 11, 2006, from http://www.civilrightsproject.harvard.edu/research/esea/nclb_unraveling.php
- Sunderman, G., Tracey, C., & Orfield, G. (2004, September). *Listening to teachers: Classroom realities and No Child Left Behind*. Retrieved September 2, 2004, from Harvard University, The Civil Rights Project Web site: http://www.civilrightsproject.harvard.edu/research/articles/NCLB_Survey_Report.pdf
- Taris, T. W., Van Horn, J. E., Schaufeli, W.B., & Schreurs, P. J. G. (2004, March). Inequity, burnout and psychological withdrawal among teachers: A dynamic exchange model. *Anxiety, Stress & Coping*, 17(1), 103-122. Retrieved November 1, 2004, from EBSCOhost database.
- Taylor, G., Shepard, L., Kinner, F., & Rosenthal, J. (2003). *A survey of teachers' perspectives on high-stakes testing in Colorado: What gets taught, what gets lost*. (CSE Technical Report 588). Retrieved October 3, 2004, from University of Colorado, Center for Research on Evaluation, Standards, and Student Testing Web site: <http://education.colorado.edu/faculty/welnerk/Taylor.pdf>
- Thomas, P. L. (2001). Standards, standards everywhere, and not a spot to think. *English Journal*, 91(1) 63-67. Retrieved April 8, 2003 from ProQuest database.
- Tozer, S. E., Violas, P.C., & Senese, G. (2002). *School and society: Historical and contemporary perspectives* (4th ed.). New York: McGraw-Hill.
- U.S. Census Bureau. (2004). *Arizona quick facts*. Retrieved November 20, 2004, from U.S. Census Bureau Web site: <http://quickfacts.census.gov/qfd/states/04000.html>

- U.S. Department of Education. (1991-1993). *America 2000*. Washington, DC: Dept. of Education. (ERIC Documentation Reproduction Service No. ED354006)
- U.S. Department of Education, National Center for Education Statistics. (2004). *The condition of education 2004* (NCES 2004-077). Washington, DC: U.S. Government Printing Office.
- U.S. Department of Education, Office of Elementary and Secondary Education (2002, September). *No Child Left Behind: A desktop reference*. Washington, DC: U.S. Government Printing Office.
- U.S. Department of Education, Office of the Secretary (2003). *What to know and where to go: Parents' guide to No Child Left Behind*. Washington, DC: U.S. Government Printing Office.
- U.S. National Archives. (n.d.). *100 milestone documents*. Retrieved December 11, 2004, from <http://ourdocuments.gov/content.php?page=milestone>
- Weaver, R. (2003, May). Great public schools for every child [Viewpoint]. *NEA Today*, 21(8), 5.
- Weisberg, J., & Sagie, A. (1999, May). Teachers' physical, mental, and emotional burnout: Impact on intention to quit. *Journal of Psychology*, 133(3), 333-339. Retrieved October 13, 2004, from EBSCOhost database.
- Whiteman, J. L, Young, J.C, & Fisher, M. L. (1985, Spring). Teacher burnout and the perception of student behavior. *Education*, 105(3), 299-305. Retrieved October 4, 2004, from EBSCOhost database.
- Wiley, E.W., Mathis, W.J., & Garcia, D.R. (2005, September). *The impact of the adequate yearly progress requirement of the federal No Child Left Behind Act on*

the Great Lakes Region. Arizona State University, Education Policy Research Unit.

Retrieved May 1, 2006, from

<http://www.asu.edu/educ/eps1/EPRU/documents/EP5L-0509-109-EPRU.pdf>

Woody, E. L., Buttles, M., Kafka, J., Park, S., & Russell, J. (2004). *Voices from the field:*

Educators respond to accountability. Retrieved March 2, 2004, from the Berkeley,

CA. Policy Analysis for California Education Web site:

http://pace.berkeley.edu/ERAP_Report-WEB.pdf

Appendix A
Demographic Survey Instrument

Please answer the following questions as they apply to you.

Choose one (1) category that best identifies your current teaching assignment:

- Generalist (multiple subjects)
- Specialty Area (art, music, physical education)
- Special Education
- Speech

Choose the grade level, or grade levels, you currently teach:

Current Grade Level Taught K 1 2 3 4 5

Gender Female
 Male

Age _____

Number of years teaching _____

Thank you for taking time to complete this survey packet!

Appendix B

Maslach Burnout Inventory and Permission to Use

The Maslach Burnout Inventory is a copyrighted publication of Consulting Psychologists Press, Inc. It is not permitted to be presented but may be obtained for licensed use (only) by contacting them at 3803 E. Bayshore Road, Palo Alto, CA 94303.

Appendix B continues with a series of personal correspondences that document permission rights and conditions granted by Consulting Psychologists Press, Inc.

---- Original Message ----

From: Nancy Zanoletti
To: Anne Hanson
Sent: Thursday, October 20, 2005 3:47 PM
Subject: CPP Inc qualifications

Dear Anne,

Your qualifications have been updated with CPP Inc., you now have C level student qualifications which allow you to order any of the products we carry including the Maslach Burnout Inventory. Please feel free to refer to customer number 318863 for any orders.

Nancy Zanoletti
Customer Relations
CPP, Inc
800-624-1765, ext 230

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Fortune 1000 organizations are benefiting from more effective leadership and coaching programs, faster team building, and cost saving employee retention initiatives by working with CPP Professional Services. Whether you need end-user training, train-the-trainer programs, assistance with implementing CPP technology, or in depth analysis of your assessment data, contact 1-800-624-1765 for more information, or click on <http://www.cpp.com/services/professionalservices.asp>

----- Original Message -----

From: webmaster@cpp-db.com
To: Anne Hanson
Sent: Thursday, October 20, 2005 4:23 PM
Subject: Account Status

Dear Anne,

Thank you for keeping your account information up to date. The account changes you made on 10/20/2005 are now in effect. To verify your account settings, or make additional changes, go to 'My Account' on CPP.com.

Thank you for using CPP.com.

From: perms
Sent: Tuesday, May 23, 2006 8:26 PM
To: Anne Hanson
Subject: Re: Permission to use

Dear Ms. Hanson,

I will issue the second agreement today and mail it out with your previous agreement which I have countersigned.

Thank you,

Eliza

From: Anne Hanson [text removed]
Sent: Monday, May 22, 2006 3:20 PM
To: perms
Cc: Dr. Steve Seteroff
Subject: Re: Permission to use

Eliza,

I will include the credit line (below) as requested. I have attached the completed form you sent. Thank you: -)

I have not yet received final copy/ies of the previous permission agreement (that required the fee). I am eager to receive the agreement so that I may scan and place it in my dissertation as an appendix/evidence of permission.

Thank you again for your promptness in all matters relating to my dissertation.

Anne

Anne Hanson
[Text removed]

----- Original Message -----

From: perms
To: Anne Hanson
Sent: Monday, May 22, 2006 8:09 AM
Subject: RE: Permission to use

Ms. Hanson,

Please include the following credit lines right below the diagram as follows.

"Modified and reproduced by special permission of the Publisher, CPP, Inc., Mountain View, CA 94043 from Maslach Burnout Inventory Manual, Third Edition, by Christina Maslach, Susan E. Jackson, Michael P. Leiter. Copyright 1996 by CPP, Inc. All rights reserved. Further reproduction is prohibited without the Publisher's written consent."

I will issue the preliminary agreement to you today via email, the original will follow in the mail for your signatures.

Thank you,

Eliza McLane
 CPP, Inc., Permissions Coordinator.
 650 691-9105

From: Anne Hanson [Text removed]
Sent: Sunday, May 21, 2006 7:07 AM
To: perms
Cc: Dr. Steve Seteroff
Subject: Re: Permission to use

Eliza,

Here is the revised page re: my diagram. As you can see the title is now outside and above the diagram per your request. Please let me know if the acknowledgement I have added below the diagram -- the red part -- is necessary and if so, acceptable. Thanks much. Anne

[see page 27 for diagram. Bold-faced text, which follows, represents text referred to on page 27 as "the red part."

Figure 1. Conceptual framework designed for the study illustrating the integration of burnout's three-subscales and the six areas of mismatch (Maslach et al., 2001) within the contextual realm of the larger circle representing the No Child Left Behind workplace. **"No Child Left Behind Accountability and High Stakes Testing Work Place Environment"** is positioned outside above the diagram per agreement with CPP, Inc."

Thanks again,

Anne

Anne Hanson

[Text removed]

----- Original Message -----

From: perms

To: [Anne Hanson](#)

Sent: Friday, May 19, 2006 8:03 AM

Subject: RE: Permission to use

Dear Ms. Hanson,

I will give you permission to use the diagram with the understanding that an agreement has to be issued to give you permission to use the descriptions of the MBI subscales, in your diagram. I am also requesting you use the title of "No Child Left Behind Accountability and High Stakes Testing Work Place Environment" outside above the diagram.

If you are in agreement, please let me know so I can issue an agreement.

Thank you,

Eliza McLane
CPP Permissions Coordinator.
650 691-9105

From: Anne Hanson [Text removed]

Sent: Thursday, May 18, 2006 5:59 PM

To: perms

Subject: Re: Permission to use

No, the diagram is my own. I used to teach 7th grade students how to create Venn diagrams to help them understand concepts, so I just applied what I had taught for almost 20 years and drafted a diagram of what I had read about the two approaches to understanding burnout in relation to what I know viscerally to be the NCLB environment.

I hope that helps. Thank you: -)

Anne

Anne Hanson

[Text removed]

----- Original Message -----

From: perms

To: Anne Hanson

Sent: Thursday, May 18, 2006 2:25 PM

Subject: RE: Permission to use

Dear Ms. Hanson,

Did you obtain the diagram and concept from the MBI manual? and from what page. Once I have that information I will be able to determine if I can give you permission to use it.

Thank you,

Eliza

From: Anne Hanson [Text removed]

Sent: Thursday, May 18, 2006 2:00 PM

To: perms

Subject: Re: Permission to use

Hi Eliza,

You should be getting my completed permission forms and check soon. Thank you for sending them.

I have a new question related to my study, which involves No Child Left Behind legislation and its possible relationship to burnout. I have created a Venn diagram (see below) that supports why I believe burnout may exist in the workplace. My mentor wants me to make sure the diagram does not pose potential copyright infringements. I respect his concern and

feel confident that the diagram I have pasted in below is nothing more than a doctoral student's attempt to justify her study. I respectfully hope you concur. Thank you much.
Anne -- Anne Hanson

Anne

Anne Hanson

[Text removed]

----- Original Message -----

From: [perms](#)

To: [Anne Hanson](#)

Sent: Friday, June 09, 2006 9:16 AM

Subject: RE: Permission to use

[Thank you for notifying me, I will attach your email to your original signed agreement noting the change.](#)

[Eliza](#)

From: Anne Hanson [mailto: text removed]

Sent: Wednesday, June 07, 2006 7:02 PM

To: perms

Subject: Re: Permission to use

Hi Eliza,

For strictly grammatical reasons, (which just came to my attention), I would like to use the word "workplace" versus "work place" above the figure as is currently in our agreement. I trust we will not need to reissue the agreement which I already mailed. Thank you much.

"No Child Left Behind Accountability and High Stakes Testing [Workplace](#) Environment"

Anne

Anne Hanson

Appendix C

Script for Research Assistants Administering Survey

General Directions and Script for Hanson's *Survey* Research Assistants

Research Assistant Tasks

1. Remind principals to leave the room during survey administration as agreed upon with the researcher.
2. Distribute the survey packets.
3. Read aloud the informed consent agreement.
4. Distribute index cards for gift bag drawing. (Distribute pencils as necessary.)
5. Monitor completion of survey and clarify instructions without deviating from script.
6. Maintain quiet during the survey's completion.
7. Collect completed survey packets, checking that each item is completed on each survey and demographic survey instrument. Place completed survey packets in envelope provided and return to the school secretary. Notify principal of survey's completion.
8. Conduct drawing for gift bag winner.

Script

1. (Say to principal cordially): [*Principal's Name*], *Ms. Hanson mentioned you agreed to leave the room while I administer the survey. Thank you so much. I am certain this will only take 30 minutes or less. When I bring the survey packets to the secretary, I will call you. Where might I be able to reach you?*
2. (Say to faculty in room): [*Ladies and/or Gentlemen*], *I am distributing a survey packet to each of you and providing a pencil if you need one. Please let me know if I missed anyone. Please do not look through the packet. I have been asked to read aloud the informed consent agreement, which is the first page of your packet, before you begin the survey.*
3. (Say to faculty in room): *On behalf of the researcher, I will now read the informed consent agreement. [Read informed consent agreement]*



Informed Consent Agreement

Dear Teacher,

I am a student at University of Phoenix working on a Doctor of Educational Leadership degree. I am conducting a research study entitled *The Attitudes and Feelings of Elementary School Teachers* concerning personal and job-related attitudes of teachers.

Participation is *voluntary* and anonymous. A teacher at your school acting as my research assistant has distributed and will collect all survey packets. The entire survey process should take no more than 30-minutes of one of your district's regularly scheduled meetings, a forum that provides optimal conditions according to the authors of the survey instrument.

The survey packet includes this informed consent agreement and a two-part survey consisting of a brief demographic survey instrument and a 22-question survey. The questions concern teacher attitudes and feelings towards themselves and their work. Please respond honestly, according to how things are *now*, not how things were in the past, or how things might be in the future. Once you have completed your survey, please return the entire packet to the teacher acting as my research assistant.

You are free to terminate your participation at any time. However, as a token of my appreciation, participants completing the survey are eligible to win a *Teacher Gift Bag* whose contents have been donated by me and the Arizona Education Association. As this survey is completely *anonymous*, my research assistant will not give me the index cards with your names on them. They are for prize drawing purposes only.

Since I have attended to all issues regarding ethics of human assurance, this research poses no anticipated risks to you. While there may be no direct benefit to you, results of the study may benefit teachers greatly, since better understanding of teacher attitudes may provide principals and instructional leaders keener insight into school cultures, helping them prepare more effective and meaningful professional development experiences for their teachers.

The return of your completed survey packet will be considered your consent to participate.

Please contact me at [text removed] if you have any questions concerning my research study. Thank you in advance for your participation.

Sincerely,

Anne M. Hanson, Teacher



4. (Hold up gift bag referred to in the informed consent agreement and say to faculty in room): Now that you know you may win this teacher gift bag for your willingness to participate in the survey, I am going to give each of you an index card. Please write your name on it. When you turn in your completed survey packet, please return the card with your name on it. I will place returned cards in this prize bag [show prize bag provided]. After I have collected all your surveys and placed them in this large unmarked envelope [show envelope], I need to bring them to the secretary in the main office. When I return, I will draw the name of the lucky teacher who will win the gift bag.

5. (Say to faculty in room): [*Ladies and Gentlemen*], *you may now turn to the second page of your packet, entitled demographic survey instrument.* [Show teachers demographic survey page, which is on the next page in your script.]



Demographic Survey Instrument

Please answer the following questions as they apply to you.

Choose one (1) category that best identifies your current teaching assignment:

- Generalist (multiple subjects)
- Specialty Area (art, music, physical education)
- Special Education
- Speech

Choose the grade level, or grade levels, you currently teach:

Current Grade Level Taught K 1 2 3 4 5

Gender Female

Male

Age _____

Number of years teaching _____

Thank you for taking time to complete this survey packet!

[Research Assistant]

Continue by saying the following:

Following the demographic survey instrument, you will see the two-sided Educators Survey. Directions on how to complete the survey appear on one side and a 22-question survey on the other. I will now read the purpose and directions to you. [Show them the direction page, which is the next page of your script.]



SAY:

Please follow along as I read the directions aloud.

[*Note.* The MBI-ES includes directions for completing the survey, which is called “Educators Survey” on the instrument. The MBI-ES directions, which appeared on this page, were removed in compliance with copyright agreements made with the publisher: The Maslach Burnout Inventory is a copyrighted publication of Consulting Psychologists Press, Inc. It is not permitted to be presented but may be obtained for licensed use (only) by contacting them at 3803 E. Bayshore Road, Palo Alto, CA 94303.]



SAY

Remember: There are no right or wrong answers, so be honest. Answer questions according to how things are now, not how things were in the past, or how things might be in the future. You may now complete your demographic survey and your Educators Survey.

Questions to follow.

[*Note.* MBI-ES directions appearing on the second side of the survey, which concerned the frequency scale, appeared on this page. The MBI-ES numbers, 1 to 22, and spaces for answers also appeared. The actual questions were replaced with the words “questions to follow.” All MBI-ES matter appearing on this page were removed in compliance with copyright agreements made with the publisher: The Maslach Burnout Inventory is a copyrighted publication of Consulting Psychologists Press, Inc. It is not permitted to be presented but may be obtained for licensed use (only) by contacting them at 3803 E. Bayshore Road, Palo Alto, CA 94303.]

6. Maintain quiet during the survey's completion. If teachers ask questions about how to complete the survey, please encourage them to reread the directions on the *Educators Survey* but do not deviate in any way from the script provided.

7. Collect completed survey packets and index cards, checking that each item is completed on each survey and each demographic survey instrument. Place index cards in the prize bag I have provided. Once all survey packets have been checked and returned to you, please place them in the large envelope provided and seal the envelope.

8. (Say to faculty in room): *Thank you, everybody. I am going to the office to deliver the completed packets to the school secretary and locate our principal so we can continue our meeting. When I return, I will choose the winning name from the basket of index cards collected and award the gift bag.*

Thank you much!

Anne M. Hanson

Appendix D

Informed Consent to Conduct Research

Text has been blocked to preserve the anonymity of the elementary school district.

REQUEST TO CONDUCT RESEARCH IN: [Text blocked.]

Send [Text blocked.]

[Text blocked.]

I wish to conduct a research project in ([Text blocked.]) and request approval of the Research Committee to contact the appropriate personnel.

<u>Anne M. Hanson</u> Name	<u>May 31, 2005</u> Date
<u>Teacher</u> Position	[Text blocked.] Phone

Return Address: 11013 East Sahara Drive, Scottsdale, AZ 85259 anne_hanson@qwest.net

Research Project is for:

ASU Class MA Thesis University of Phoenix Doctoral Dissertation, EdD
 Faculty Research University Research Other

Title and Purpose: URBAN ELEMENTARY SCHOOL TEACHER ATTITUDES IN THE AGE OF ACCOUNTABILITY: A cross-sectional survey study to ascertain how teacher attitudes vary dependent upon teaching assignments, i.e., generalist v. specialty area.

Approximate number and grade levels of pupils to be involved: No students will be involved. The human services survey will involve elementary school teachers, K - 5.

Name of school(s) and what facilities will be needed: The survey will be administered to teachers at elementary schools that share common characteristics (See list on second page.)

Approximate class time required per pupil: No class time is required. (See attached.)

Deadline for completion: Prior to April 15th, 2006

Comments: The Arizona Education Association (AEA) has agreed to help fund this survey study. See attached.

Date: 7/26/05 Approved: [Signature] Disapproved: _____

Signature: [Signature blocked.]

Approval indicated on this form is intended to grant to the researcher the opportunity to contact the appropriate personnel to gain their approval and support of this project.

Appendix E
University of Phoenix
Informed Consent Agreement

Dear Teacher,

I am a student at University of Phoenix working on a Doctor of Educational Leadership degree. I am conducting a research study entitled *The Attitudes and Feelings of Elementary School Teachers* concerning personal and job-related attitudes of teachers.

Participation is *voluntary* and anonymous. A teacher at your school acting as my research assistant has distributed and will collect all survey packets. The entire survey process should take no more than 30-minutes of one of your district's regularly scheduled meetings, a forum that provides optimal conditions according to the authors of the survey instrument.

The survey packet includes this informed consent agreement and a two-part survey consisting of a brief demographic survey instrument and a 22-question survey. The questions concern teacher attitudes and feelings towards themselves and their work. Please respond honestly, according to how things are *now*, not how things were in the past, or how things might be in the future. Once you have completed your survey, please return the entire packet to the teacher acting as my research assistant.

You are free to terminate your participation at any time. However, as a token of my appreciation, participants completing the survey are eligible to win a *Teacher Gift Bag* whose contents have been donated by me and the Arizona Education Association. As this survey is completely *anonymous*, my research assistant will not give me the index cards with your names on them. They are for prize drawing purposes only.

Since I have attended to all issues regarding ethics of human assurance, this research poses no anticipated risks to you. While there may be no direct benefit to you, results of the study may benefit teachers greatly, since better understanding of teacher attitudes may provide principals and instructional leaders keener insight into school cultures, helping them prepare more effective and meaningful professional development experiences for their teachers.

The return of your completed survey packet will be considered your consent to participate.

Please contact me at [Text removed] if you have any questions concerning my research study. Thank you in advance for your participation.

Sincerely,
Anne Hanson, Teacher