

2010-01-01

Closing the Achievement Gap: Impact of Inclusion Upon Achievement Rates of Students with Special Needs

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CLOSING THE ACHIEVEMENT GAP: IMPACT OF INCLUSION
UPON ACHIEVEMENT RATES OF STUDENTS
WITH SPECIAL NEEDS

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CLOSING THE ACHIEVEMENT GAP: IMPACT OF INCLUSION
UPON ACHIEVEMENT RATES OF STUDENTS
WITH SPECIAL NEEDS

by

KATHLEEN BLACK, B.S., M.S.

DISSERTATION

Presented to the Faculty of the Graduate School of
The University of Texas at El Paso
in Partial Fulfillment
of the Requirements
for the Degree of

DOCTOR OF EDUCATION

Department of Educational Leadership and Foundations

THE UNIVERSITY OF TEXAS AT EL PASO

August 2010

Acknowledgements

The lifetime dream of earning a doctorate in my chosen field of education has come to fruition through the contributions of many loved ones. To Lisa, my spirited and delightful younger daughter who has been there with me every night as we both worked on our respective educations. Your laughter, encouragement, dedication, and loyalty inspire me and keep me grounded. You are my laughter and sunshine! I will miss you dearly as you leave the nest and begin college. To Megan, my confident and joyful older daughter, who has listened and supported my efforts while working diligently on a bachelor's degree. Your kindness, compassion, strength of character, and joyful heart inspire me daily. You are my joy and my light! May all your dreams come true as you begin marriage and law school. To my mother, Rose, who ignited in all of her children the desire to learn and achieve in life, and whose friendship and love have never once waived. You have been an integral and essential part of our lives, and I could not have done it all without you. You are a model of strength, determination, and happiness for all the females in your life. You are my role model! To my father, Harrison, whose loving presence transcends time and continues to touch our lives daily.

Finally, I would like to thank the professors who served on my dissertation committee. Dr. Sorenson, who took the time to ensure that my work reflected the quality which engenders pride; your professionalism and knowledge in the field of education guided this work. Dr. Schulte, whose expertise in the practical applications of education and testing influenced my perspective. Your recommendations for achievement testing are well validated. Dr. Espinoza, whose caring nature and knowledgeable guidance in statistical procedures was incalculable. I would most certainly be ABD without your tutorial sessions. Dr. Calvo, whose expertise opened up new vistas through a culturally responsive lens. Our discussions of special education were very enlightening. I deeply appreciate each of your efforts on my behalf, as well as the time and effort you have dedicated to the achievement of my dreams.

Abstract

The purpose of this research study was to examine the relationship between the amount of time a student with special needs spends in the inclusive classroom and their achievement passing rates in mathematics and reading. TAKS passing rates for mathematics and reading for third graders in 2007-2008, and the same cohort of fourth graders in 2008-2009 were analyzed to determine the strength of relationship between the predictor variable of TAKS achievement passing rates, and the independent variables of amount of time included (PEIMS Instructional Setting) and socioeconomic status.

Logistic regression was utilized to analyze the relationship between amount of time included and TAKS achievement passing rates in reading and mathematics. Correlations and crosstabulations were also employed to provide deeper insight into the data analysis. Logistic regression in mathematics demonstrated a strong correlation between the amount of time student with special needs was included in the general education setting and their TAKS achievement passing rates in both years of the study. Correlations and crosstabulations further enhanced these findings with higher passing rates correlated with greater amounts of time included.

Logistic regression in reading demonstrated correlation between the amount of time a student with special needs was included in the general education setting for greater than half of their school day and their TAKS achievement passing rates in reading for both years of the study. Correlations and crosstabulations showed increased passing rates in TAKS reading for those students included for more than fifty percent of the day, and decreased passing rates in TAKS reading for those students included for less than fifty percent of the day.

One interesting discovery was the link between socioeconomic status and student achievement passing rates on TAKS. Statistical analyses showed no correlation between SES and mathematics in 2007-2008 or 2008-2009. The same analyses showed no correlation between SES and reading in 2007-2008, but found correlation between SES and reading in 2008-2009. It is possible that student disability eclipses socioeconomic status, and the appropriate type of TAKS test may alleviate some of the effects of socioeconomic status generally reported in the research on student achievement.

A lengthy discussion of the development and implementation of culturally responsive systems, instruction, and achievement testing followed the statistical analysis of the data. Systemic reform measures involving the changing of mindsets toward culturally responsive instruction is foundational to addressing the issues of equity and diversity at the heart of the differentials in achievement among typically developing students and students with special needs.

Finally, recommendations were made regarding systems change as well as future research in the area of inclusion and student achievement. Research which examines the impact of inclusion upon students, parents, teachers, schools, and communities will provide data which paves the way for change in the hearts and minds of society.

Table of Contents

Acknowledgements.....	iv
Abstract.....	vi
List of Tables.....	xix
Chapter	
I. The Promise of Inclusion.....	1
Northern Pass Independent School District.....	3
Demographics.....	3
Theoretical Framework.....	3
Social Ecology Model.....	4
Statement of Problem.....	5
Purpose of Study.....	8
Least Restrictive Environment.....	8
Achievement Testing.....	10
Scale Scores Versus Vertical Scale Scores.....	11
Texas Projection Measure.....	12
Focus of Study.....	13
Significance of Study.....	15
Results of Study.....	15
Guiding Questions.....	16
Hypothesis.....	17
Definition of Key Terms.....	17
Organization of Remaining Chapters.....	20
Summary.....	22

II.	A Review of the Literature	23
	Inclusion Defined.....	23
	Cultural Competence.....	26
	Socioeconomic Status.....	28
	Disproportionality.....	29
	Accountability and Inclusion.....	30
	Accountability and Least Restrictive Environment.....	31
	A Legislative Overview.....	33
	Section 504.....	33
	P.L. 94-142.....	33
	P.L. 99-457.....	34
	P.L.101-476.....	34
	P.L. 108-446.....	34
	IDEIA AND NCLBA	35
	Individuals with Disabilities Act	35
	No Child Left Behind Act.....	38
	Dual Impact of NCLBA and IDEIA	40
	Special Education and Accountability Measures.....	41
	Achievement Testing for Special Learners.....	42
	Texas Assessment of Knowledge and Skills	43
	Texas Assessment of Knowledge and Skills Accommodated	43
	Texas Assessment of Knowledge and Skills Modified.....	43
	Texas Assessment of Knowledge and Skills Alternate.....	44
	Legislative Impact of NCLBA and IDEIA	45

Why Inclusion?	47
Parental Perspectives	49
Teacher Perspectives.....	52
Student Perspectives	54
Legal Perspectives	56
Teaching and Learning	57
Reflective Teaching	57
Teaching for Learning.....	58
Critics of Inclusion.....	60
Parental Perspectives	61
Teacher Perspectives.....	62
Student Impact	63
Social Ecology Model.....	64
Learning and Social Ecology	65
Historical Perspective of Special Education	66
Early Societies	67
Medieval Views	68
The Renaissance.....	68
The Enlightenment.....	69
Colonial England	72
The 1800's	75
1900-1950	79
1950-1960	84
1960-1980	87

1980-2000	91
2000-2010	92
Education Today	92
A Medical Model	94
Equity and Inclusion	95
Cultural Deficit Theory	96
Inclusive Design.....	98
Systemic Change.....	99
Schools	100
Teachers	101
Culturally Responsive Instruction.....	102
Differentiated Instruction.....	103
Cooperative Learning.....	105
Collaboration.....	106
Co-Teaching.....	108
Response to Intervention.....	110
The Process of Learning	112
Universal Design.....	114
Leadership.....	116
Societal Views on Inclusion: Who Should be Included and Who Should Not?	116
Past to Present	120
Accountability to Diverse Populations	121
Legislative Impact.....	122
Inclusion for Diverse Learners.....	126

Conclusion	127
Summary	129
III. Methodology	130
Introduction	130
Purpose of Study	131
Research Questions	132
Participants and Sample	133
Dependent Variable	134
Independent Variables	134
Data Analysis	136
Limitations of Study	138
Delimitations of Study	140
Summary	142
Chapter	Page
IV. Data Analysis	143
Research Questions	143
Socioeconomic Status	144
Gender	145

Instructional Setting	145
Mathematics 2007-2008.....	147
Instructional Setting and TAKS Mathematics Test Type	147
2007-2008 Instructional Setting and Mathematics	147
Students Coded 40	148
Students Coded 41	148
Students Coded 42	149
Students Coded 43	149
Students Coded 44	149
TAKS Mathematics 2007-2008	150
TAKS Accommodated 2007-2008	150
TAKS Modified 2007-2008.....	151
Logistic Regression for Mathematics 2007-2008	151
Instructional Setting (Inclusion)	152
Type of TAKS Test.....	152
Socioeconomic Status	153
Correlation Matrix	153
Correlations for Mathematics, 2007-2008	154
Mathematics 2008-2009.....	154
Students Coded 40	155

Students Coded 41	155
Students Coded 42	155
Students Coded 43	156
Students Coded 44	156
TAKS Mathematics 2008-2009	156
TAKS Accommodated Mathematics 2008-2009	157
TAKS Modified Mathematics 2008-2009	157
Logistic Regression for Mathematics 2008-2009	158
Instructional Setting (Inclusion)	158
Type of TAKS Test.....	159
Socioeconomic Status	159
Correlation Matrix	159
Correlations for Mathematics 2008-2009	160
Reading 2007-2008.....	161
Instructional Setting and TAKS Reading Test Type	161
Instructional Setting and Reading.....	161
Students Coded 40	161
Students Coded 41	162
Students Coded 42	162
Students Coded 43	162

Students Coded 44	163
TAKS Reading 2007-2008	163
TAKS Accommodated Reading 2007-2008	163
TAKS Modified Reading 2007-2008.....	164
Logistic Regression for Reading 2007-2008	164
Instructional Setting (Inclusion)	164
Type of TAKS Test.....	165
Socioeconomic Status	165
Correlation Matrix	166
Correlations for Reading 2007-2008	166
Reading 2008-2009	167
Instructional Setting and Reading.....	167
Students Coded 40	167
Students Coded 41	168
Students Coded 42	168
Students Coded 43	168
Students Coded 44	169
TAKS Reading 2008-2009	169
TAKS Accommodated Reading 2008-2009	169
TAKS Modified Reading 2008-2009.....	170

Logistic Regression for Reading 2008-2009	170
Instructional Setting (Inclusion)	170
Type of TAKS Test.....	171
Socioeconomic Status	171
Correlation Matrix	172
Correlations for Reading 2008-2009	172
Reading Versus Mathematics	173
Summary	174
Mathematics 2007-2008 and 2008-2009	174
Reading 2007-2008 and 2008-2009.....	176
V. Interpretation of Results.....	179
Research Results	179
SES and Passing Rates for Mathematics and Reading	179
Mathematics and Passing Rates and Inclusion	180
Recommendations for Practice	181
Mathematics and Special Needs	182
Mathematics and Achievement.....	182
Reading and Special Needs.....	184
Reading and Achievement	184
Well-Designed Instruction	185

Direct, Systematic, and Explicit.....	185
Identification and Intervention.....	188
Evaluation of Reading Disability.....	188
Researching Special Education and Reading Achievement	189
Fundamental Considerations.....	190
Equity and Diversity	190
Inclusive Practice	192
Measuring Inclusive Practice.....	193
Sociocultural Considerations	193
Disproportionality	195
Social Constructs of Difference	198
Implications for Change.....	200
Legislation.....	200
Technical Assistance.....	201
Educational Opportunity	201
Culturally Competent Assessment.....	202
Curricular Standards	205
Creating Culturally Responsive Educational Systems.....	206
Linguistic and Behavioral Diversity	208
Culturally Responsive Classrooms	208
Culturally Responsive Teachers	209
Culturally Responsive Instruction.....	210
Creating Culturally Relevant Schools.....	212
Policy Making	213

Recommendations for Future Research	215
Policy Making	215
Inclusive Programming	216
Teacher Development	216
Equity, Diversity, and Inclusion	217
Summary	218
References	220
Appendices.....	246
Appendix A: IRB Documentation	246
Appendix B: Tables	257
Curriculum Vitae	301

List of Tables

Table 1.1: Subpopulation Percentages in Northern Pass I.S.D.....	258
Table 1.2: Instructional Setting (PEIMS Codes) for Inclusion.....	259
Table 2.1: Maslow’s Hierarchy of Needs	260
Table 3.1: Socioeconomic Status of Students with Special Needs.....	261
Table 3.2: Gender of Special Education Students 2008-2009	262
Table 4.1: Instructional Setting for Special Education Students	263
Table 4.2: Students by Instructional Setting and Test Mathematics.....	264
Table 4.3: Crosstab of Instructional Setting and TAKS Math Pass/Fail Rates 2008	265
Table 4.4: Crosstab of Instructional Setting and TAKS A Math Pass/Fail Rates 2008.....	266
Table 4.5 Crosstab of Instructional Setting and TAKS M Math Pass/Fail Rates 2008	267
Table 4.6: Model Summary, Hosmer-Lemeshow, and Spearman Mathematics 2008	268
Table 4.7: Regression Equation, Mathematics 2007-2008	269
Table 4.8: Correlation Matrix for Mathematics 2007-2008.....	270
Table 4.9: Correlation for Mathematics 2007-2008	271
Table 4.10: Correlation for Instructional Setting, Pass/Fail Rates, and Test Type Mathematics 2007-2008.....	272
Table 4.11: Crosstab of Instructional Setting and TAKS Math Pass/Fail Rates 2009	273
Table 4.12: Crosstab of Instructional Setting and TAKS A Math Pass/Fail Rates 2009.....	274
Table 4.13: Crosstab of Instructional Setting and TAKS M Math Pass/Fail Rates 2009	275
Table 4.14: Model Summary, Hosmer-Lemeshow, and Spearman Math 2009.....	276
Table 4.15: Regression Equation for Mathematics 2008-2009	277
Table 4.16: Correlation Matrix for Mathematics 2008-2009.....	278
Table 4.17: Correlation for Mathematics 2008-2009	279

Table 4.18: Correlation for Instructional Setting, Pass/Fail Rates, and Test Type for Math 2008-2009	280
Table 4.19: Students by Instructional Setting and Achievement Test Reading 2007-2008 and 2008-2009	281
Table 4.20: Crosstab of Instructional Setting and TAKS Reading Pass/Fail Rates 2008.....	282
Table 4.21: Crosstab of Instructional Setting and TAKS A Reading Pass/Fail Rates 2008.....	283
Table 4.22: Crosstab of Instructional Setting and TAKS M Reading Pass/Fail Rates 2008	284
Table 4.23: Model Summary, Hosmer-Lemeshow, and Spearman Reading 2007-2008	285
Table 4.24: Regression Equation for Reading 2007-2008.....	286
Table 4.25: Correlation Matrix for Reading 2007-2008.....	287
Table 4.26: Correlation for Reading 2007-2008.....	288
Table 4.27: Correlation for Instructional Setting, Pass/Fail Rates, and Test Type Reading 2007-2008 and 2008-2009	289
Table 4.28: Crosstab of Instructional Setting and TAKS Reading Pass/Fail Rates 2009.....	290
Table 4.29: Crosstab of Instructional Setting and TAKS A Reading Pass/Fail Rates 2009.....	291
Table 4.30: Crosstab of Instructional Setting and TAKS M Reading Pass/Fail Rates 2009	292
Table 4.31: Model Summary, Hosmer-Lemeshow, and Spearman Reading 2008-2009	293
Table 4.32: Regression Equation for Reading 2008-2009.....	294
Table 4.33: Correlation Matrix for Reading 2008-2009.....	295
Table 4.34: Correlation for Reading 2008-2009.....	296
Table 4.35: Correlation for Instructional Setting, Pass/Fail Rates, and Test Type for Reading 2008-2009	297
Table 4.36: Reading and Mathematics Passing Rates 2007-2008 and 2008-2009.....	298
Table 4.37: Overview of Correlations for LRE and Math Pass Rates	299

Table 4.38: Overview of Correlations for LRE and Reading Pass Rates	300
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Chapter One

The mind must imagine and choose a path into the unknown and then cross the boundary, on its own responsibility, at its own risk. Its choice is an act of faith... (Kallen, 1958, p. 54)

The Promise of Inclusion

Today's demand is that the schools serve a wider range of students than they did in the past and that they cause all, or nearly all, of these students to undertake tasks that result in substantial academic learning. The standards all students are now expected to meet are standards that just a generation ago only a few students were required to meet. Schools functioning as they have in the past cannot meet this demand. (Schlechy, 2001, p. xiv)

Inclusive education is a philosophy which has been in existence for approximately thirty years (Sindelar, Shearer, Yendol-Hoppey, & Liebert, 2006). One definition of inclusive education provided by Udvari-Solner and Kluth (2008) is a 'value-based practice that attempts to bring all students, including those with disabilities, into full membership with their local school'. Ali, Mustapha, and Jelas (2006) and Kalambouka, Farrell, Dyson, and Kaplan (2007) iterate the concept that inclusion allows students with special needs to receive instruction in the inclusive classroom by an inclusive teacher.

A vision for inclusive schooling should portray a diversity of students learning together in the general education classroom through inclusive, culturally responsive design rather than being pulled out to a separate classroom; segregated settings and exclusive environments must be examined in an effort to unify all services provided for students able to participate in a less restrictive environment. Culturally diverse students with and without special needs, English language learners, and students with learning differences and difficulties will be taught with their

peers by teachers, reading specialists, therapists, and program coaches who collaboratively plan, develop, and deliver lessons tailored to the needs of each student in order to provide all services necessary for all diverse learners, including learners with special needs, to participate inclusively with his or her age peers. The context of the classroom is structured and adapted so that all children may participate and benefit from inclusion.

Moen (2008) in his qualitative study of teacher behavior in the inclusive setting insists upon an ideology addressing social, cultural, and academic inclusion for all students. Perencevic and Hulbert (as cited in Rudd, 2002) indicate that full inclusion occurs when all children have access to all opportunities available to non-disabled students. Idol (2006) informs us that inclusion occurs when special needs students spend one hundred percent of their time in the general education classroom, and that inclusion and mainstreaming are ways in which we educate special learners in a less restrictive environment.

A focus upon such ideology requires a deep systemic change in which the framework for inclusionary environments is developed through careful examination of current systems at the school district and campus levels, the analysis of student need, and the elements of teacher support for inclusive, culturally responsive environments. The philosophical foundation in Northern Pass Independent School District regards the education of all diverse groups of students as foundational to the school district philosophy. With the advent of a new administration in 2005, the special education model became part of the district wide plan for improvement in Northern Pass Independent School District with support at the highest levels for special education. The systemic development of inclusionary environments is currently the focus of the special education department in the Northern Pass Independent School District.

Northern Pass Independent School District

Demographics

The Northern Pass Independent School District is located in a large urban area which serves students of all socio-economic levels, however, the majority of students are located in a low socio-economic bracket, with a largely bilingual, Hispanic population. The Northern Pass Independent School District serves approximately sixty-five thousand students with approximately five thousand five hundred of those students qualifying for special education services. There are more than ninety campuses in this border school district located in the southwestern United States. N.P.I.S.D. made many structural changes in administration in 2005, and in 2008 initiated a district wide focus on the provision of inclusive environments.

Northern Pass Independent School District, while located in a large urban area, has campuses in vastly differing areas of the city; many campuses are located in low socio-economic areas with high poverty rates, while some campuses are located in more affluent neighborhoods. The large military base in the city contributes to a vastly diverse population of students from different areas of the United States. There is an air in N.P.I.S.D., perhaps due to the unique characteristics which define the city itself, which promotes family values and children. This very attribute, combined with the low education levels of parents in the city, creates a unique and fascinating combination of qualities which contribute to the educational environment. The specific subpopulation data for Northern Pass Independent School District is noted in Table 1.1.

INSERT TABLE 1.1 HERE

Theoretical Framework

Social Ecology Model

Instead of regarding social class, ethnicity, and religion as attributes of the person, we shall come to see them for what they are, namely, structured aspects of the environment that function to enhance or inhibit the processes of making human beings human.

(Bronfenbrenner, 2005, p. 46)

Bronfenbrenner's work in the field of human development recognizes the importance of the larger environment upon the development of a child. Since developmental processes are profoundly affected by schools, families, and the community at large, social and educational policies can positively shape and impact child development. Bronfenbrenner's seminal work in the seventies with the ecological framework continued throughout the nineties, and Hallahan and Kaufman (1995) emphasized the importance of viewing special education through the social ecology lens. As we approach the twenty-first century, Bronfenbrenner (2005) presents the social ecological perspective which holds disability as a result of external environmental factors, thus, as a society and a school system, we are better able to teach diverse students as well as students with special needs when we change their environment.

Special education is typically viewed as a response to children's defined deficits (Nilholm, 2006). Through the medical model, and assignment to programming based upon disability category, special education has come under attack with the implementation of inclusive environments as a notion of democracy for the disabled. While the deficit theory locates disability within the child, a more interactive approach, such as Bronfenbrenner's social ecology model (2005), defines disability through external environmental factors which interact with the child, and which may be changed to meet the needs of the child.

Social ecology further instructs that the environment and systems within which our schools operate are systems which may be changed and adjusted to meet the needs of society (Lipsky & Gartner, 1994). Although the work of Lipsky and Gartner is slightly dated, researchers in the field today such as Udvari-Solner and Thousand (2008) remind us that schools and systems must be designed to meet the diverse needs of the learners within them through collaboration and universal design techniques. The far reaching implications of the work of Bronfenbrenner and social ecology informs school systems to reframe their mental model of the social constructions of disability, and consequently, to reshape educational structures, systems, and educator perspectives to meet the needs of a more diverse learning community of students.

Johnston (1982) and DuFour, DuFour, Eaker, and Many (2006) enlighten those who endeavor to initiate systemic change; educational systems are bound by the shared commitment of all within the organization. Sorenson and Goldsmith (2009) argue that school administrators must develop a shared vision and commitment to the learning of all students. A shared commitment toward the acceptance of diversity and learners with special needs provides the foundation for systemic change. Schlechty (2001) posits that systemic reform affects social structures and the culture in which these structures are embedded. Reform merely changes systems, not people. However, changing systems within an organization also serves to shape behavior within that organization. Initiatives and programs which stray from tradition cannot be implemented successfully unless the systems in which they are embedded are changed to be supportive of them (Schlechty).

Statement of Problem

With the advent of a new administration in 2005, the Northern Pass Independent School District began to focus on improving instructional outcomes and achievement gains for all of its

students. Texas Assessment of Knowledge and Skills (TAKS) reading and math scores district wide were reportedly low for all student subgroups, including special education, and the school district began the implementation of a framework for improving instruction and test scores. The Texas Education Agency (2010) reports TAKS testing data for every school district in the state. The 2007 testing year marked the final administration of the State Developed Alternate Assessment (SDAA) for students with special needs, and 2008 ushered in the administration of TAKS, TAKS Accommodated, and TAKS Modified for special education students. The Texas Education Agency website (2010) indicates 2007 SDAA reading test scores for third graders showed seventy-five percent passing with math scores at sixty-four percent passing. Fourth grade SDAA scores showed reading scores at seventy percent passing with math scores also at seventy percent passing. Fifth grade SDAA scores showed reading scores at sixty-two percent passing with math scores at seventy- two percent passing. Since the dawn of a new administration in 2005, and district focus on instructional programming, educational gains in the district have been noted and test scores continue to rise.

The provision of inclusive environments has existed in schools and classrooms in the Northern Pass Independent School District since the passage of IDEIA in 2004. At that time resources were dedicated to the training and implementation of inclusive settings throughout the district, however, the provision of inclusive classrooms was inconsistent across the district. In 2008, the Northern Pass Independent School District began a new initiative for developing and implementing inclusive environments. The achievement scores of special education students as reported on TAKS were lower than those of other subgroup populations, and the improvement of instructional outcomes for students with special needs through inclusive settings became a district-wide initiative.

The provision of inclusive classrooms has proven to be an onerous task. Programs have been reassessed for efficacy, and frameworks addressing inclusion have been reformulated. Professional development for teachers and campuses has focused on the development of inclusive design, scheduling of support, as well as strategies for co-teaching and differentiation of the curriculum. Strong fiscal support has been dedicated to professional development as well as campus support for classroom teachers in the process of developing inclusive environments.

In the three years since Northern Pass Independent School District initiated a strong drive to provide inclusive environments, campuses have succeeded in placing students in the general education classroom and increasing LRE (least restrictive environment) ratios; students with special needs are being included in the general education setting. This study seeks to determine the relationship between the amount of time a student with special needs spends in the inclusive setting and their achievement passing rates on TAKS reading and math. While students with special needs are being included in the general education classroom, it is this researcher's focus to determine the impact that inclusion has had upon the TAKS passing rates of learners with special needs.

The No Child Left Behind Act of 2001 requires that all students receive access to general education curriculum at their assigned grade level, and additionally, that all students meet state standards of proficiency on state assessments (Yell, Shriver, & Katsiyannis, 2006). Placement in the least restrictive environment is a cornerstone in the provision of a free appropriate public education for special needs students (Texas Education Agency, 2006). Ratcliffe and Willard (2006) cite No Child Left Behind in stating the purpose of the legislation: "to insure that all children have a fair, equal, and significant opportunity to obtain a high-quality education and reach, at minimum, proficiency on challenging state academic achievement standards and state

academic assessments.” Villa, Thousand, and Nevin (2004) point to No Child Left Behind as an effort to ensure that diverse students achieve high academic standards in a rigorous general education curriculum. Atkinson and Geiser (2009) note that the best achievement tests are both valid and reliable, such as TAKS, which assess state standards and student achievement of such standards.

Purpose of Study

Providing inclusive environments in all campuses in the Northern Pass Independent School District has proven to be a large scale task on which the district has focused heavily since 2008. Numerous factors impact the successful inclusion of special learners into the general education classroom such as 1) teacher expertise and attitude, 2) school environment, 3) parental support, 4) appropriate special education supports and services based upon IEP determination, and 5) instructional accommodations for students (Villa, 2004). However, while the factors enumerated are fundamental to the success of an inclusive program, they are not the focus of this particular study.

Least Restrictive Environment

The relationship between the amount of time included in the general education setting and special education student state standardized test passing rates (as measured by the Texas Assessment of Knowledge and Skills) is the focus of this study. There is a significant lack of research addressing the amount of time which a student with special needs spends in the inclusive environment and its link to student achievement. R. A. Villa (personal communication, January 28, 2010) notes there is not a substantial amount of research connecting student achievement data to amount of time in the inclusive environment. While much research supports the benefits of the inclusive environment (Visser & Stokes, 2003; McCarty, 2006; Frederickson,

2007; Kalamhouka, et al., 2007; Moen, 2008) such research fails make the connection between student achievement rates and the amount of time spent in the general education setting.

It is important to note the finite distinction between the concepts of inclusion and least restrictive environment. Inclusion is the including of students with special needs into the general education setting with appropriate supports and services (Villa, et al., 2004). Least restrictive environment as defined in P.L.108-446 requires that students with special needs be educated in the least restrictive environment based upon their individual needs (Heward, 2009). Placement in the LRE can range from placement in a self-contained classroom all day to inclusion for part of the day; the individual needs of each student determine the least restrictive setting. For one student, the LRE may well be a self-contained classroom, while for another student the least restrictive environment may be the inclusive setting for all or part of the day (Villa, et al.). IDEA mandates provision of a continuum of placement services for every student with special needs. This continuum of services ranges from placement in the general education setting for students who require less specialized services; to students who require more intense and specialized services in the self-contained setting (Heward, 2009). Additionally, the continuum of services may include placement in a residential facility if the needs of the student so determine.

The determination of LRE is made through the following process (Heward, 2009):

- ④ The school evaluates the student to determine if there is a disability, and if special services are needed.
- ④ The IEP committee examines the students individual needs and develops and individual education plan (IEP). They also determine the specialized instruction and related services needed for the student to meet their IEP.

- ④ The student is placed in the LRE in which his/her teachers can provide appropriate instruction and in which the student can make satisfactory achievement.

For the purposes of this study, the distinction between LRE and inclusion must be iterated. The determination for least restrictive environment is determined by the IEP committee, and the LRE could be any setting. However, the amount of time a student with special needs is included in the general education setting is the primary focus of this study.

Smith (2007) conducted a study of the fifty states in which he determined precisely how much each state had increased its student participation in the inclusive environment. Smith's study noted that in 1997, Texas showed twenty-four percent of its students with special needs spending seventy-nine percent of their time in the inclusive environment. Unfortunately, by 2003, Texas had increased its least restrictive environment ratios by a mere 4.2%. His study fails to provide the link between percentage of time in the inclusive environment and student achievement rates. Interestingly, in 2006 there were nearly six million students in the United States with disabilities, with fifty-four percent of these students being served through inclusive environments (Giangreco, Hurley, & Suter, 2009). With only half of students with disabilities being included, the call for change is imminent.

Achievement Testing

Popham (2001) notes the impact of the Elementary and Secondary Education Act of 1965 (ESEA) upon the achievement testing of students. According to Popham, the funds dedicated to schools through ESEA demanded accountability to the spending of the funds, which led to the use of standardized achievement tests as measures of student learning. By 1980, many states had adopted the use of standardized measurement to assess learning outcomes for students. Popham

contends that the ranking of schools and school districts accompanied the mandated use of standardized testing in the late 1980's.

The Texas Education Agency website (2010) describes the testing process over the past few years. Prior to 2008, special education students were administered a state developed alternate assessment (SDAA) which measured (students) at their current level of achievement; for example, an eighth grade student reading on a third grade level would have been administered a third grade level SDAA reading test. Beginning in 2008 (TEA, 2010), all special education students were to be administered a TAKS test in the form of TAKS, TAKS Accommodated, TAKS Modified, or TAKS Alternate. The Individual Education Plan (IEP) for a special student determines which version of the TAKS test is appropriate for each individual student based upon the instructional level and needs of the student. According to the Texas Education Agency (2010), the Texas Assessment of Knowledge and Skills (TAKS) measures proficiency on grade level standards with on-grade level content; whereby, the SDAA measured proficiency at a particular level, but not proficiency at a student's assigned grade level. Comparing testing data before 2007-2008 would generate non-comparable data sets and would invalidate the study; therefore, TAKS testing data beginning in 2007-2008 provides the baseline for this study.

Scale Scores versus Vertical Scale Scores

The state of Texas utilized a horizontal scale score reporting system for students taking TAKS, TAKS Accommodated, and TAKS Modified until the 2008-2009 school year. Students received a score report which indicated a horizontal scale score; a score of 2100 indicated mastery of content, or passing, while a scale score of 2400 indicated a commended performance by the student. All subject areas and all grade level tests utilized the same scale score with

passing at 2100 (TEA, 2010). However, in 2008-2009, the reporting of student test results first began reporting student test scores in a vertical scale format (TEA, 2010) as well as a horizontal score format. According to TEA, a vertical scale score allows for a comparison of previous year's scores with the scores of the current year's test and allow parents, teachers, and school districts to better predict student achievement. Vertical scale scores were not provided to school districts prior to 2008-2009, and such data will not be available for TAKS Modified until the 2010-2011 school year. Since the 2007-2008 testing data for N.P.I.S.D. does not allow for a comparison of vertical scale scores, nor are the TAKS M results reported in a vertical scale format at the time of this research, this study will examine passing rates in the horizontal scale format for the purposes of comparing special education student achievement over time.

Texas Projection Measure

The state of Texas is currently in the process of initiating a multi-level regression-based projection model (TEA, 2010). This measure, the Texas Projection Measure (TPM), uses prior years' vertical testing scores to project the required growth of each student in addition to providing a prediction of whether or not the student will pass or fail subsequent TAKS tests. The TPM provides an indication of how student performance at the end of one school year will predict the likelihood of meeting standard in subsequent years. According to Zyskowski and O'Malley (2010) the use of growth models for measuring and predicting student performance was a requirement of Senate Bill 1031. The vertical scale scores reported range from 0-1000 as opposed to the horizontal scale score of 2100 utilized up to the 2008-2009 school year.

Projection measures are based upon previous year vertical test scores, so projection equations for 2009-2010 would be based upon 2008-2009 testing data (TEA, 2010). According

to TEA, projection equations for students taking TAKS Modified will not be available until the 2010-2011 testing administration, as the 2009-2010 TAKS Modified testing data will be utilized to set the projections for the 2010-2011 year.

Focus of Study

This study will focus upon the amount of time which students with special needs spend in the inclusive environment as measured by Public Education Information Management System (PEIMS) data and the relationship to their achievement test passing rates, as measured by the Texas Assessment of Knowledge and Skills (TAKS). The study will follow a third grade cohort of students with special needs administered TAKS, TAKS Accommodated, and TAKS Modified beginning in 2007-2008 and following the cohort of students through fourth grade in 2008-2009.

The purpose for selecting a third grade cohort of students to follow through fourth grade was considered carefully. Third graders typically have only one teacher who is responsible for both reading and math. Fewer teachers working with the students lends less complexity to the data study. In addition, elementary students are more responsive to their teachers than secondary students, and the measurement of learning is less complicated by maturity issues. Lastly, the provision for inclusive environments begins in pre- kindergarten programming, with initial achievement testing beginning in the third grade. Brain research supports the notion that early identification of learning disabilities is paramount, for this is the time period in which the brain has more plasticity, with expanded opportunities for re-routing neural circuits in children (Shaywitz, 2003). For this reason, a study which initiates with third graders, youngsters whose brains are still forming with the greatest possibilities for neural development, and who are in their first year of testing with the Texas Assessment of Knowledge and Skills (TAKS) will provide rich data regarding the relationship between amount of time in the inclusive environment

and TAKS test passing rates for students with special needs. Ultimately, it is this researcher's intent to utilize the findings of this study to further develop high quality inclusionary programming in Northern Pass Independent School District.

Special education services for students are supported by a continuum of services provided to students as determined through their individualized education plan (IEP). The IEP sets the goals and objectives which teachers must provide and monitor, in addition to the grade level standards which apply to students in general education (Heward, 2003). A student's goals and objectives further define the individualized instruction which must occur for each student based upon their individual need. IDEIA assumes the general curriculum is the foundation for the development of goals and objectives for special education students with the general education setting appropriate where practicable (Yell & Shriner, 2005) while NCLBA sets the framework for accountability to all student learning, including special education students (Ratcliffe & Willard, 2006). With the dual mandates of both IDEIA and NCLBA, impetus for the inclusion of students with special needs has never been stronger.

The level of student inclusion is categorized by a PEIMS (Public Education Information Management System) Instructional Setting code of 40, 41, 42, 43, or 44. Students with a code of 40 are fully mainstreamed and spend one hundred percent of their day included. Students with a code of 41 spend seventy-nine percent or greater of the day included, and students with a PEIMS code of 42 spend fifty percent or greater of the day included. Students with a PEIMS code of 43 spend forty to forty-nine percent of the day included, and students with a PEIMS code of 44 spend less than forty percent of the day included in the general education setting. The research study will focus on data from 2007-2008 and 2008-2009 which examines the amount of time each student spends included in the general education classroom, TAKS reading scores, TAKS

math scores, student grade level, SES, and level of inclusion in an effort to determine the level of relationship between amount of time in the inclusive setting and the achievement passing rates of students with special needs in the Northern Pass Independent School District. Data gathered from all third grade students with special needs across the district ensures a valid cross-section of learners and school environments in the study. Instructional setting, as determined by PEIMS codes, for students with special needs in the Northern Pass Independent School District is noted in Table 1.3.

INSERT TABLE 1.3 HERE

Significance of the Study

Research examining the relationship between special education student achievement passing rates as measured by the state standardized test, Texas Assessment of Knowledge and Skills (TAKS), and the percentage of time spent in the inclusive environment (PEIMS data), through an inclusionary model will allow this researcher to begin the development of a framework to address systemic change in the Northern Pass Independent School District. With No Child Left Behind mandating the provision of inclusive environments for special learners (Ratcliff & Willard, 2006), the N.P.I.S.D. began the district wide process of providing inclusive environments in 2008. Each school in the district began the process of including students with consideration to student ability and need, teacher acceptance, and campus support structures. The individual needs of a special learner, as well as the campus environment, determine the particular model for inclusion which a campus implements.

Results of Study

The results of this study will assist the school district in the improvement of inclusionary programming through the data provided which explores the relationship between the amount of

time in the inclusive environment and special education student testing data. It is this researcher's intent that the data from this study will illuminate the importance of providing an inclusionary environment for the academic benefit of learners with special needs.

The study will further assist this researcher in the process of developing programming which will support teachers and students in the successful inclusion of learners with diverse and special needs into the general education classroom. Research data which highlights the impact of inclusion upon the achievement of learners with special needs will support district initiatives to provide inclusive environments through the development of district and school level support mechanisms, the building of teacher capacity, and the formation of instructional programming which meets the diverse needs of included learners.

The results of this study will provide research as well as practical application data for the purposes of the improvement of special education programs in the Northern Pass Independent School District. Recommendations stemming from the research study will be made to provide a framework for systemic change supporting inclusionary environments for learners with special needs.

With limited research linking the correlation between the amount of time a student with special needs participates in general education with their TAKS passing rates, it is this researcher's hope to contribute to the field of research addressing the provision of inclusive environments in the public schools today.

Guiding Questions

The provision of inclusive environments in the Northern Pass Independent School District lends itself well to a study of the relationship between the amount of time a student with special needs participates in the inclusive classroom and their achievement test passing rates.

Hypothesis

The amount of time a student spends in the inclusive environment and its relationship to the achievement passing rates of students with special needs as measured by the state standardized assessment (Texas Assessment of Knowledge and Skills, TAKS) is the focus of this study. The inclusion of students with special needs into the general education setting should show higher achievement passing rates for these included students over time.

Definition of Key Terms

Content Standards: The knowledge and skills students should master at a give grade level (Popham, 2001).

Culture: A system of beliefs and values which guide people in their lives (Rothstein-Fisch & Trumbull, 2008).

Culturally Responsive Teaching: Teaching which recognizes, honors, and reflects the cultural diversity among students (Chartock, 2010).

Curriculum: The ends or goals which we want students to achieve (Popham, 2009).

Descriptive Research: Research which describes educational phenomena, facts, events. This type of research makes predictions and tests hypothesis (R. Rincones, class discussion, September 29, 2008).

Disproportionality: The representation of a group of students in certain categories which differs greatly from that of other students in the same category (Skiba, Simmons, Ritter, Gibb, Rausch, Cuadrado, & Chung, 2008).

Diversity: The wide range of differences and similarities including social class, socioeconomic status, education, ethnicity, culture, language and abilities of children (Churton, Cranston-Gingras, & Blair, 1998, p. 5).

English as a Second Language (ESL): The primary instruction is in English whereby the student acquires more studied practice in English (Churton, Cranston-Gingras, & Blair, 1998).

FAPE: A free appropriate public education which provides meaningful educational benefit to special education students (Yell, et al., 2006).

General Curriculum: The Texas Essential Knowledge and Skills (TEKS), which specify what students are to learn each year (Walsh, Kemerer, & Maniotis, 2005, p. 102).

IDEA: Individual's With Disabilities Act, 1975.

IDEIA: Individual's With Disabilities Education Act, 2004.

Inclusion: The process by which a student with a disability may benefit socially and or academically within the general education classroom with goals that are the same, or different, from those for non-disabled peers (Valle & Conner, 2011).

IEP: Individual Education Plan which is developed for each student with special needs. This individual education plan developed by the admission, review, and dismissal (ARD) committee develops the goals and objectives for each student based upon individual need (Heward, 2003).

Least Restrictive Environment: To the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are non-disabled (Sacks, 2009, p. 242).

Mainstreaming: Students with disabilities who are able to negotiate the general education curriculum and classroom without assistance may participate in the general education setting (Valle & Conner, 2011).

NCLBA: No Child Left Behind Act, 2001.

Resource Classroom: Classroom for special needs students where they receive additional instruction in the core areas from a special education teacher (Northern Pass I.S.D.).

Standardized Test: A test that is administered and scored according to a standard set of Protocols (Popham, 2001).

Standards-Based Test: A criterion referenced test which measures the acquisition of state curriculum standards (Popham, 2001).

Self-Contained Classroom: Classroom for special needs students where they spend 50% or more of the school day (Northern Pass I.S.D.).

TAKS: Texas Assessment of Knowledge and Skills test.

TAKS Accommodated: Texas Assessment of Knowledge and Skills Accommodated test.

TAKS Alternate: Texas Assessment of Knowledge and Skills Alternate test.

TAKS Modified: Texas Assessment of Knowledge and Skills Modified test.

Students with Special Needs: Students who have been diagnosed with one or more disabilities: specific learning disabilities, emotional disturbance, autism, other health impaired, mental retardation, orthopedic impairment, speech or language impairment, hearing impairment, visual impairment, and traumatic brain injury (Argus-Calvo, 1999).

Organization of Remaining Chapters

This study will be reported in five chapters. The first chapter contains the introduction to the study with subsections addressing the need for research examining the amount of time a student with special needs spends in the inclusive setting and its relationship to student achievement passing rates. The purpose of such research, its significance, the methodology proposed, and key terms are presented in chapter one.

Chapter two is a review of the current literature in the area of inclusion. This chapter begins with definitions of inclusion and what inclusion should encompass. The legislative mandates for the provision of inclusive environments are then presented with specific discussion of the accountability and testing requirements for students with special needs. Following the legislative requirements is a presentation of both advocacy and critique of inclusion with perspectives from parents, students, and teachers. Current research in the area of instruction and best practice is then presented, as well as the lens for viewing learning through the social ecology model. The historical journey which people with disabilities have made is fundamental to understanding and is presented at length in the chapter. The historical journey concludes with education today and the equity issues and cultural deficit theory surrounding the inclusion of the disabled. The actual practice and design of inclusion is then discussed and brought back to accountability considerations in our schools today. Chapter two concludes with the importance of shared commitment within the organization which facilitates the implementation of inclusionary environments and society's role in respecting human diversity.

Chapter three presents the research design and methodology for this study. The study utilizes a logistic regression model to examine the strength of relationship between the dependent variable of TAKS passing rates and the independent variables of amount of time included

(PEIMS) and SES. Frequencies, crosstabulations, and non-parametric correlations were used to provide deeper analysis of the data. Chapter four presents the results and analysis of the research study and chapter five provides a lengthy discussion of the results as well as implications in the current field of inclusion and possible areas of future study.

Summary

Chapter one provided an introduction to the inclusion of learners with special needs as well as definitions of inclusion and a vision for what inclusive environments should look like in practice. The statement of the problem highlights the issues which educators face today with legislative mandates such as No Child Left Behind and the provision of the least restrictive setting for student with disabilities in the public schools. A description of the Northern Pass Independent School District follows the introduction with research addressing systemic change. A theoretical framework based upon Bronfenbrenner's social ecology model provides a lens for viewing the inclusion of special learners and is presented next followed by the limitations and delimitations of the study. The purpose of the study indicated the need of research examining the amount of time spent in the inclusive setting and its relationship to the achievement test passing rates of elementary students with special needs. The significance of the study and its impact upon future programming for learners with special needs in the inclusive setting are discussed relative to the purpose of the study. The hypothesis briefly exploring the relationship between the amount of time in the inclusive environment and TAKS passing rates of students with special needs was presented. A definition of key terms was presented for the reader's benefit followed by the organization of the remaining chapters of this work.

Chapter Two

A Review of the Literature

They have gathered and learned in places as diverse and ordinary as one could imagine. They have met in homes and in church basements and other informal settings, in imposing buildings of astounding size and architecture, in portable classrooms on the outskirts of school playgrounds, in anonymous locations known only to those involved, and in everyday schoolrooms in the neighborhood public school. Their experiences in these settings have been even more varied than the places themselves, differentiated by purpose, belief, social mores, economic conditions, and historical eras. Over time, the location of their schools and the education provided in them have moved much closer to the mainstream of schools and society. (Osgood, 2008, p. xiv)

The education of students with disabilities through historical contexts provides a picture of the views of society regarding students with special needs. It is the intent of this chapter to provide insight into the current ideological conditions surrounding the education of learners with special needs through a historical perspective which brings us forward into the twenty-first century. As we move forward with the inclusion of special learners, we are cognizant of the past, living in the present, and preparing for a future which further recognizes and supports our students with diverse and special needs.

Inclusion Defined

While the regular classroom may not be the best learning environment for every child with a disability, it is highly desirable for all who can benefit. It provides contact with age peers and prepares all students for the diversity of the world beyond the classroom.

(Council for Exceptional Children, as quoted from Focus on Exceptional Children, 2004, p.19)

One very general vision of inclusion is that of the child with special needs attending the neighborhood school and being included in a general education classroom with his or her age level peers (Rudd, 2002). However, inclusion must fundamentally initiate as a philosophy which educators embrace in order to serve students with special needs. Valle and Conner (2011) support the notion that inclusion is a philosophy which disposes of the social construct of disability to embrace the diversity of every child. Winzer and Mazurek (2000) note inclusion revolves around the notion of how those who are able will live in society with those who are disabled. Rouse and Florian (1996) and Dukes and Dukes (2009) remind schools that mere inclusion of learners with special needs does not equate with effective learning, and that teacher capacity is a cornerstone of an effective inclusion program.

O'Connor (2007) reminds us that inclusion is a 'multi-layered' concept which broadly spans institutional policy and pedagogical training and development of all staff in a school. Slee (2001) informs us that the beneficiaries of inclusive schooling are not limited to learners with special needs, but the general education students who seek creative and engaging curriculum. Perencevic and Hulbert (as cited in Rudd, 2002, p. 11) indicate full inclusion occurs when all children have access to all opportunities available to non-disabled students. Idol (2006) informs us that inclusion occurs when students with special needs spend one hundred percent of their time in the general education classroom, and that inclusion and mainstreaming are ways in which we may educate learners with special needs in the least restrictive environment. The benefits of inclusive environments are numerous for general education students and special education students alike: students with special needs develop friendships with general education students

(Frederickson, 2007), general education students learn compassion and acceptance of diverse learners, all children benefit from the small group differentiated instructional strategies, and all children learn that every learner has unique contributions to class and society (McCarty, 2006). Downing and Eichinger (2003) remind us that the goal of inclusion is to provide academic, non-academic, and social skills acquisition.

Mitchell (2008) reminds educators inclusion is more than mere placement of a learner with special needs into the general education setting, but includes adapted curriculum, modified assignments, adapted lessons, strategies for struggling learners, and teacher support. Villa and Thousand (1995) and Webber (2005) encourage the development of school wide attitudes and belief systems which support including all learners in the educational process. Au (2010) alludes to the importance of creating a balance between American values and the culturally rich values of all students.

Although dated more a decade ago, Friend and Bursuck (1996) distinguished between the synonymously used terms of mainstreaming and inclusion still used today. They define mainstreaming as a process by which special learners capable of achieving grade level standards with minimum assistance are served in the general education setting and, conversely, inclusion is the process by which any learner with special needs may be served in the general education setting with supports and services. Valle and Conner (2011) define mainstreaming as a process by which a student with a disability could participate in the general education classroom only if able to manage the academic and social requirements of the class. They stipulate that inclusion assumes that a student with a disability participates in the general education classroom with the same or different goals as their general education peers. Winzer and Mazurek (2000) allow that mainstreaming is a predecessor to inclusion. These definitions are further supported yet today by

Sacks (2009) who defines mainstreaming as the placement of students with special needs into the general education class. She further delineates inclusion as the process by which students with special needs attend their neighborhood school with children their age and grade level, and receive instruction in the general education classroom with the supports and services they need.

Giangreco (2007) asserts the general education class should be the first consideration of placement for a student with special needs, as stipulated in IDEIA as regards least restrictive environment. The cornerstone of inclusion is the belief that learners with special needs are provided normality, dignity and respect when included in the general education setting (Zionts, 2005) while influencing academic achievement and social outcomes for students with disabilities. King (2003) asserts inclusion occurs when all students, irrespective of strengths or weaknesses, are part of the school community. Valle and Conner (2011) discuss the continuum of service options which may include participation in the general education setting for students with disabilities based upon the decisions appropriate to the individual needs of the student. Shaywitz (2003) cites U. S. Department of Education statistics indicating 4.4% of children ages six through twenty-one received special education services in the public schools in 2003. The establishment of high standards for students with disabilities has become a national agenda (Conderman & Morin, 2002; Osgood, 2008) with the recognition that students with disabilities can benefit from well planned instruction in the general education setting.

Cultural Competence

Our schools today reflect vast diversity among teachers and students (Glasgow, McNary & Hicks, 2006). Churton, et al. (1998) note the increased number of minority students being served with an over representation of minority students in special education. Hoover (2009)

emphasizes the placement of students of diverse cultures into special education as a result of educator inability to discern between learning differences and learning disabilities.

Glasgow, et al.(2006) note the importance of multicultural competence in teachers and school personnel. They underscore teacher reflection upon their own perspectives and how their perspective impacts instruction while modeling multicultural sensitivity to their students.

Teachers must assist students in cultural acceptance through engagement in activities which allow students to share their cultural beliefs. Ulezi and Jackson (2010) emphasize the underlying cultural belief systems representing the norms and values which determine how people interact and react to the world in which they live. Ulezi and Jackson present principles for cultural competence in the workplace which apply to school systems as well; 1) school personnel must become self-aware regarding their own views of diversity, 2) administrators should examine the hiring choices which they make based upon cultural views, and 3) school personnel should understand the diversity of the children they serve.

Glasgow, et al. (2006) suggest cultural and language differences represent a small portion of the diversity in schools. One in five children live in poverty, two parent homes are becoming a minority with almost sixty percent of students living with a single parent sometime before they become adults. With nearly eleven percent of students identified as disabled, the definitions of diversity are quickly expanding to reflect the overall diversity of people in society today.

The inclusion of students of diverse cultures, languages, and developmental levels requires attention to greater academic, economic, and social needs (Cartledge & Kourea, 2008). With the advent of high stakes testing through the mandates of No Child Left Behind, greater attention has been devoted to increasing the achievement scores of minority and special education subpopulations of students.

Socioeconomic Status

It may be argued that the social and human capital possessed by the middle-class families gives them access to the information needed in their choice-making, and they are more likely to take advantage of the school market system. (Willms, 1997, as cited in Yang-Hansen, 2008, p. 522)

Socioeconomic status has long been linked to student achievement (Auwarter & Aruguette, 2008) with the relationship between socioeconomic status and student achievement studied extensively in the past twenty years (Yang-Hansen, 2008). Yang-Hansen informs educators that socioeconomic status mirrors the social background of a student through the demographic details of the student's community. Family background patterns affect school choice and lead to segregation of students both ethnically and socially. Schools with students from high socioeconomic backgrounds tend to have a population of children whose family backgrounds have afforded them more effective learning environments and more positive social relationships, which in turn contribute to higher academic achievement (Yang-Hansen). Lubieniski (2007) frames the issue with a comparison of cultural differences between social classes, specifically noting that people in working class jobs are expected to be highly conforming while people in middle class occupations are encouraged to be more autonomous. He further suggests these occupations lead to differentials in parenting styles between children of lower and middle socioeconomic classes.

Achievement gaps among minority subgroups has been noted and studied extensively in the past decade (Clarkson, 2008) with the reporting of minority subgroup data in the current accountability system in Texas. Enrollment of minorities in the United States has increased in the past twenty years (Clarkson). According to Clarkson, the immigration of Asian Americans

doubled between 1980 and 2000, while during this same period, forty-one percent of Black immigrants entered the United States as well. The necessity for culturally responsive schools and teaching becomes imperative to increasing the achievement of diverse learners in the schools today, for education is the gatekeeper to higher socioeconomic status in the United States (Lubienski, 2007).

Disproportionality

IDEIA places priority upon addressing overrepresentation by race and ethnicity of students referred for special education assessment and services (Zirkel, 2008). Skiba, et al. (2008) note disproportionality occurs when a group of students is overrepresented in a category as compared to other student groups within the same category. Skiba, et al. claim the overrepresentation of minorities in special education is rooted in educational discrimination and segregation; supporting the notion that numerous factors such as assessment bias, poverty, general education inequities, cultural conceptions, and behavior management lead to a disproportionate number of minority students in special education. IDEIA notes the following as regards overrepresentation of minorities in special education (Skiba, et al.):

- States must have policies for the prevention of the racial or ethnic overidentification or overrepresentation, including special education.
- Data regarding disproportionality in special education must be collected and reported by local education agencies.
- Changes to policy and practice must be reported by local education agencies in the event that disproportionality is identified.
- Data regarding the suspension and expulsion rates of minorities must be collected and reported.

- States are required to monitor local education agency data collected on the disproportionate representation of ethnic and racial groups receiving special education supports and services.

Research in the area of gender disproportionality in special education reflects a higher ratio of males than females receiving special services. Data on secondary students indicates two-thirds of students identified special education are male, with seventy-three percent of students identified with a learning disability also being male (Coutinho & Oswald, 2005). Coutinho and Oswald point to sociocultural bias as the culprit in both the referral process and in teacher-student interactions between male and female students and resulting special education services. They further support the underrepresentation of females in special education when compared to males.

The emphasis of IDEIA upon disproportionality and the link between overrepresentation in special education and student race and ethnicity suggests a trend toward addressing culturally defined differences in schools (Skiba, et al., 2008). The emphasis of No Child Left Behind upon the achievement of special learners, in combination with the mandates of IDEIA regarding disproportionality, set into place a strong accountability to culturally diverse populations (Fielder, Chiang, Van Haren, Jorgensen, Halberg, & Boreson, 2008).

Accountability and Inclusion

In the Northern Pass Independent School District, inclusive education assumes a much broader context: a philosophy and practice in which all students, including students with disabilities and culturally diverse students, are provided a rich academic, social, and physical environment alongside their peers. The development of inclusionary environments in the Northern Pass Independent School District has been a focus for campuses in the district since

2008, however, inclusive classrooms first came into being with the passage of IDEA in 2004 and reaching as far back as 1975 with the intent of the provision of least restrictive environment. An examination of the relationship between special education student achievement passing rates and the percentage of time spent in the inclusive environment will allow this researcher to begin the development of a framework to address systemic change in the Northern Pass Independent School District.

Current data from the research and development department of the Northern Pass Independent School District portrays low test scores on state standardized achievement tests for students with special needs (TEA, 2010). There is a paucity of research examining the amount of time a student with special needs spends in the general education classroom as linked to student performance on state standardized testing measures (Villa, personal communication, January 28, 2010). Fritz & Miller (1996) cited the difficulty in measuring the effectiveness of inclusion and the need for achievement measures to substantiate effectiveness in 1996 and today, there continues to be little research linking the impact of inclusion as measured by student achievement rates.

Accountability and Least Restrictive Environment

The LRE provision of the IDEA 2004 according to the Code of Federal Regulations (CFR) §300.14 requires that each local education agency (LEA) shall ensure to the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are not disabled. Special classes, separate schooling, or other removal of children with disabilities from the regular educational environment occurs only when the nature or severity of the disability of a child is such that

education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily (TEA, 2010, p. 128).

Texas school districts are mandated to provide the least restrictive environment for all students and for special education students in particular. Sacks (2009) quotes IDEA in the definition of least restrictive environment; “To the maximum extent appropriate, children with disabilities, including children in public or private institutions or other care facilities, are educated with children who are non-disabled” (p. 242).

The provision for placing special learners in the least restrictive environment (LRE) places a demand upon school districts to provide inclusive environments, to the extent appropriate, for learners with special needs (Winzer & Mazurek, 2000; Sacks, 2009). Valle and Conner (2011) note the crucial determining factor for placement in the least restrictive environment as being the student evaluation and additionally, the committee determination as to the most appropriate instructional arrangement for each individual student; and such instructional arrangements may include a full continuum of service arrangements. Each student is examined individually with specially designed instruction and instructional arrangements determined for each student. With the mandates of IDEA and the expectation that all students be educated- to the extent appropriate to the needs of each student- with non-disabled peers, school districts are required to monitor the amount of time special needs students spend in the least restrictive environment (LRE). Texas state standards require school districts to work toward placing students with special needs in the inclusive classroom for a minimum of seventy-nine percent of each day. The Northern Pass Independent School District currently tracks data on least restrictive environment (PEIMS). This data, along with TAKS testing data for students with special needs will be utilized. This study will focus specifically upon the relationship between the amount of

time a student spends in the general education classroom (PEIMS data) and TAKS passing rates for students with special needs.

A Legislative Overview

Valle and Conner (2011) allude to the friction which occurs with the provision of appropriate education and least restrictive environment: “By all accounts, it can be argued that there has always been friction between the required considerations of both and ‘appropriate education’ and LRE” (p. 29).

The testing of students with special needs, as well as accountability to this population of learners set the framework for providing instruction in the least restrictive setting (Yell, et al., 2006). Yell, et al. contend that supporting learners with special needs in the general education setting, and administering state standardized testing to measure the learning of this group are a result of the legislative efforts of IDEIA and NCLBA and have cemented the need for attending to the instruction of the special education population.

Section 504

Section 504 of the Vocational and Rehabilitation Act of 1973: protected the civil rights of the disabled in federally supported programs such as schools. Additionally, students who are not categorized with a specific disability may be eligible to receive additional support in school through Section 504.

P.L. 94-142

P.L. 94-142, The Education for the Handicapped Act (EHA) of 1975: established federal guidelines for the provision of special educational services for students with disabilities through the IEP. This act also defined eleven disability categories, procedures for identification of

student disability, related services, due process, and made provision for parental rights within the entire process.

P.L. 99-457

P.L. 99-457, The Infants and Toddlers with Disabilities Education Act of 1986: made further provisions for children with disabilities from birth to age five through P.L. 94-142, resulting in family service plans and early intervention programs for the very young.

P.L. 101-476

P.L. 101-476, The Individuals with Disabilities Education Act of 1990: reauthorized P.L. 94-142 with expanded disability categories such as traumatic brain injury and autism, with increased responsibility to culturally and linguistically diverse special needs students, and implemented transition planning for high school students with disabilities.

P.L. 105-07

P.L. 105-07, The Individuals with Disabilities Education Act Amendments of 1997: reauthorized P.L. 101-476 whereby the general education teacher was to be included in the IEP team in the goal writing process; local and state assessments were to apply to students with disabilities; emphasis on family participation in the ARD process; required school districts to examine over-representation data on students of color in special education.

P.L. 108-446

P.L. 108-446, The Individuals with Disabilities Education Improvement Act of 2004: allowed IDEA funds to be used in the pre-referral stage for students not yet identified as disabled; required school districts to utilize the pre-referral system to address the over-representation of students of color in special education; prohibited schools from requiring students to be medicated; changed the age of transition services from fourteen to sixteen;

provided for further mediation services for parents in the ARD process; and added Tourette syndrome to the disability category of Other Health Impaired.

IDEIA and NCLBA

The legislative demand for teachers to include special education students coincides with increasing numbers of students with special needs in public schools (Hardin & Hardin, 2002; Osgood, 2008). Legislation of recent years, such as Individuals With Disabilities Improvement Act of 2004 and No Child Left Behind Act of 2001 set measures in place which endeavor to ensure quality education and accountability apply to all students and all educators (Villa, Thousand, & Nevin, 2004; Webber, 2005; Karten, 2008; Ratcliffe & Willard, 2006; Yell, et al., 2006). Skritic, Harris, & Shriner (2005) note “public education has been in a constant state of reform for the past 20 years” (p. 1).

Popham (2009) asserts America’s accountability system utilizes tests which are unable to measure how well students have been taught. Legislative efforts beginning in 1965 with the Elementary and Secondary Education Act, and continuing today with No Child Left Behind have influenced and shaped the use of standardized testing to determine school effectiveness. The assumption of NCLB is that high scoring students have been taught well and low scoring students have been taught poorly.

Individuals with Disabilities Education Act

The fundamental goal of the Individuals with Disabilities Education Act was the improvement of educational outcomes for students with disabilities (Osgood, 2008; Goessling, 2000). Winzer and Mazurek (2000) note federal mandates addressing the access to free appropriate public education (FAPE) forever changed the landscape of special education and signaled the beginning of an emphasis on accountability to the achievement of learners with

special needs. According to Yell, et al. (2006) this was accomplished through an emphasis on substantive requirements of Individuals With Disabilities Education Act, alignment of IDEA with No Child Left Behind Act, and an alteration of eligibility requirements. John Heskett, former Missouri Assistant Commissioner for Special Education explains IDEA: “IDEA establishes clear preference that students with disabilities be educated with their peers who do not have disabilities and, a clear expectation that students with disabilities have meaningful access to the general education curriculum” (Heskett, as cited in Ratcliffe & Willard, 2006 p. 2).

Standards based curriculum is comprised of content standards which define what a student should know and be able to do. Performance standards delineate how well a student must perform in order to demonstrate mastery of the content standards. The early 1990’s witnessed the beginning of standards based reform when policy makers coined the phrase in an effort to reform public schools (Popham, 2003). At the state level, teachers and specialists formed committees to determine content standards for each grade level. Based upon those chosen standards, state wide assessments were developed to measure student mastery of the content standards. Standards based reform assumes that annual administration of standardized tests will encourage teachers to ensure student mastery of content.

Thurlow (2005) notes the early standards based reform measures excluded special education students from standards as well as assessments and accountability reporting. IDEA 1997 required states to include special education students in their assessment reporting, and by 2000, all states were doing so. In addition, IDEA required states to use an alternate assessment for students with special needs who could not participate in the regular assessment, and gave rise to state developed alternate assessments (SDAA). Thurlow notes the recommendations of the

National Research Council (1997) regarding students with disabilities and standards based reform:

- State education agencies and local education agencies which utilize standards based curriculum should design and implement content standards, performance standards, and assessments which include learners with special needs.
- Students with disabilities should participate in local standards but may require alternate standards or assessments where appropriate.
- The IEP process should link the special education student to the standards based curriculum.

President Clinton signed the Individuals with Disabilities Education Act Amendments of 1997, PL 105-97. This law reauthorized IDEA of 1994. IDEIA did the following (Yell & Shriner, 2005):

- Enhanced the role of the parent in education further supporting P.L. 94-142 since 1975.
- Mandated access to general education curriculum and classrooms.
- Reduced paperwork so as to focus on instruction and learning.
- Addressed the cost of providing special services.
- Addressed diversity and over-representation since the 1990's.
- Ensured safe schools for learning.
- Encouraged parents and schools to mediate their concerns.

IDEIA assumes the general education curriculum is the foundation for IEP goals for learners with special needs, and, further, that a student with special needs should only be removed from the general education setting when supplementary supports and services in the

general setting are not benefitting the student; such supports and services provide the foundation for the effective inclusion of students with special needs (Yell & Shriner, 2005).

The precedence for least restrictive environment is set in IDEA with the requirement that each child with a disability be educated with non disabled peers to the maximum extent possible (Ratcliffe & Willard, 2006, Sacks, 2009). IDEA further delineates the designation of the general education setting with the stipulation that children with disabilities should only be removed from the general education setting when the nature or severity of their disability is such that they cannot be served satisfactorily in the general education classroom with supplementary aids and services provided (Ratcliffe & Willard).

No Child Left Behind Act

No Child Left Behind Act of 2001 was sweeping legislation which reauthorized the original Elementary and Secondary Education Act of 1965 (Ratcliffe & Willard, 2006). NCLBA was intended to improve the performance of all elementary and secondary schools by increasing accountability standards and ensuring higher standards in reading and math. No Child Left Behind states its purpose: “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” (Ratcliffe & Willard, 2006 p. 2).

School districts today are facing significant challenges regarding the education of diverse populations of children. Recent educational reforms have brought great change and great controversy to the field of education (Winzer & Mazurek, 2000). The past twenty years have witnessed vast changes in the education of students with special needs as regards their specific educational programming needs (Sacks, 2009). Recent years have witnessed a decline in

society's belief in the school's ability to educate all children. Sailor and Skrtic (1996) allude to the uncertainty in our modern world stemming from cultural, economic, and professional changes which the entire world is undergoing; and which questions the very foundations of the institutions which society has established.

People have come to realize the barriers to individual success hinge upon racial and economic foundations (Murtadha-Watts & Stoughton, 2004). Critics of the educational system insist public education serves to socialize vast numbers of people into a system which maintains the status quo (Goodlad, 1984; Murtadha-Watts & Stoughton, 2004). The task of socializing students with a wide range of needs while meeting national and state standards simultaneously has proven to be an onerous task (Yell, et al., 2006). Skrtic, et al. (2005, p. 72) inform educators that accountability is ensured through standards based reform: "Standards based reform has become the mechanism of accountability with a focus upon measurable student outcomes, accountability of the school, reporting of public school performance, and consequences for school failure."

According to Johnston (1993) and Yell, et al. (2006) legislators have responded to demands for change through the mandates of standardized testing and accountability measures. The emergence of legislation such as the No Child Left Behind Act of 2001 (Ratcliffe & Willard, 2006) and Individuals With Disabilities Act (Ratcliffe & Willard, 2006; President's Commission, 2001), show a strong disposition toward providing the appropriate education for each individual. Researchers in the history of schooling note that No Child Left Behind is the latest effort to address academic failure which has existed throughout the history of public schooling (Tyack, 2003). Educators have always struggled with the plight of failing students and Tyack and Benavot (1987) noted Americans have always relied upon the formation of laws to address

reform in public education. Educators had many diagnoses and prescriptions for such pupils and disagreed about how to reach the children left behind (Tyack, 2003, p. 5): Were students mostly the same or mostly different? Should the laggards be tracked and given a separate curriculum, or should all students be helped to learn the same subjects? Winzer and Mazurek (2000) note that ongoing assessment of instruction is a basic tenet of an effective curriculum.

Dual Impact of NCLBA and IDEIA

No Child Left Behind and Individuals with Disabilities Improvement Act mandate that students with special needs must be served in the least restrictive environment in their neighborhood school (Yssel, Engelbrecht, Oswald, Eloff, & Swart, 2007; Sacks, 2009). Yssel, et al. indicate as well, that general education assumes the responsibility for educating students with special needs through special assessment which informs instruction. Ratcliffe and Willard (2006) define least restrictive as the environment which is as close to a general education class as is practicable; most often the general education classroom. Guerin and Male (2006) define least restrictive environment as a basic tenet of IDEA whereby students with disabilities are included in the general education setting alongside their non-disabled peers. IDEA, with the focus on educating students in the least restrictive environment, and NCLBA with the focus on higher expectations and achievement students with special needs as appropriate with rigorous academic standards' measurement results in the mandated inclusion of special students as appropriate with rigorous academic standards' measurement. School districts throughout the United States have a dual focus today; they must meet the targets for increasing inclusion while producing higher academic outcomes for their special education population (Kalambouka, et al., 2007).

The implementation of state wide standards is fundamental to the tenets of No Child Left Behind (Villa, Thousand, Nevin, & Liston, 2005). These academic standards define the

knowledge and skills which each student should acquire at each grade level (Texas Education Agency, 2010). Although states have utilized state curricular standards since 1994, No Child Left Behind brought the implementation of standards to a new level. School districts have developed scope and sequences for schools as well as standards based curriculums in each subject for teachers to implement. The curriculum standards now apply to all students regardless of ability or disability (TEA, 2010).

No Child Left Behind mandates all student progress be monitored yearly through assessment (Yell, et al., 2006). These assessments should measure student knowledge of the state's required content standards through a norm referenced format. Annual measurement for all students is required in reading and math, grades three through ten, and in science grades five, eight, and ten (Texas Education Agency, 2007). This annual measurement allows schools and parents to track the progress each child has made in reading and math, and to provide appropriate interventions to every student.

Special Education and Accountability Measures

Annual measurement of all students has evolved from a period in which students with special needs were measured annually only through the attainment of IEP goals and objectives. The annual administrations of Texas achievement measures such as Texas Assessment of Basic Skills (TABS), Texas Assessment of Academic Measurement of Skills (TEAMS), and Texas Assessment of Academic Skills (TAAS) brought attention to the annual achievement of the general population of students. The requirements of No Child Left Behind have narrowed the focus to include special education students as well as linking student achievement to teacher performance (Sacks, 2009). Beginning in 2008, special education students were required to take an achievement test at their assigned grade levels as opposed to being tested at their identified

achievement level. This was the first time in the history of education that special needs learners and their teachers were accountable to an on-grade level achievement test (TEA, 2010). This change impacted every teacher and every student with a disability as the scores for special education students were factored into Texas school and district accountability ratings (Texas Education Agency, 2010).

Achievement Testing for Special Learners

Every student receiving instruction in the essential knowledge and skills shall take the appropriate criterion-referenced assessments, as required by the Texas Education Code (TEC), Chapter 39, Subchapter B. A student receiving special education services under the TEC, Chapter 29, Subchapter A, enrolled in grades 3-11 and who is receiving instruction in the essential knowledge and skills, shall take the assessment of academic skills unless the student's admission, review, and dismissal (ARD) committee determines that it is an inappropriate measure of the student's academic progress as outlined in the student's individualized education program (IEP). If the student's ARD committee determines that the assessment of academic skills is an inappropriate measure of the student's academic progress in one or more subjects, the student shall take the alternate assessment of academic skills in the subject or subjects. (Texas Administrative Code, as cited in TEA, 2010, p. 34)

Student scores on the yearly state standardized tests, in part, determine a school's accountability rating. IDEA 1997 and IDEIA 2004 require that all students with disabilities participate in state standardized testing (Texas Education Agency, 2010). In addition, special education students comprise a singular reporting subgroup. NCLBA requires that all student subgroups receive, and be tested on, grade level content standards (Yell, et al., 2006). The

combined impact of these legislative measures has redefined achievement testing in the state of Texas through the application of TAKS, TAKS Accommodated, TAKS Modified, and TAKS Alternate.

Texas Assessment of Knowledge and Skills

The TAKS test measures the achievement standards of each grade level with no modifications or accommodations to the test (Texas Education Agency, 2004). Special education students who take the regular TAKS are students who need no accommodations or modifications to learn in the general education setting.

Texas Assessment of Knowledge and Skills Accommodated

The Texas Education Agency (2010) addresses the TAKS Accommodated test as an exam which special education students receiving specific accommodations may take. The content on TAKS Accommodated is identical to the TAKS test, but it allows learners with special needs to use accommodations in order to access the curriculum and the test. The TAKS Accommodated utilizes larger font, fewer items per page, and eliminates field test items. The TAKS Accommodated is administered to special education students who function on grade level.

Texas Assessment of Knowledge and Skills Modified

TAKS Modified is an alternate assessment based on modified achievement standards designed for special education students who meet participation requirements. TAKS Modified meets federal requirements of the No Child Left Behind (NCLBA) Act. All students, including those receiving special education services, must be assessed on grade level curriculum. TAKS Modified addresses the same grade-level content as the TAKS, however, TAKS–M reflects changes in format and test design (Texas Education Agency, 2010). According to the Texas Education Agency (2010), school districts may only administer TAKS –M to 2% of their total

special education population. According to the Texas Education Agency (2010), a modified achievement standard must align with the curriculum standards for a student's enrolled grade level, and may reduce the breadth and depth of the general curriculum. The requirement for students with disabilities to take the state wide exam led to the need for accommodations and modifications for the student to access the curriculum and the test. The TAKS Modified meets the criteria for the modified achievement standard and is a test commonly used for students who function below grade level. This test measures grade level content through a format which has more white space, larger font, and is slightly below grade level.

Texas Assessment of Knowledge and Skills Alternate

The Texas Education Agency (2010) developed the Texas Assessment of Knowledge and Skills–Alternate, or TAKS–Alt, to meet the requirements of the No Child Left Behind Act. TAKS–Alt assesses special education students in grades 3–11 who have significant cognitive disabilities. Unlike other statewide assessments in Texas, TAKS–Alt requires that teachers observe students as they complete state-developed assessment tasks reflecting grade-level Texas Essential Knowledge and Skills (TEKS) curriculum through the use of prerequisite skills. Alternate achievement standards and modified achievement standards (Yell, et al., 2006) are allowed through IDEIA. An alternate achievement standard must be aligned with the state academic content standards, allow access to the general curriculum, and reflect educator judgment of the highest possible achievement standards for each particular special education student. TAKS Alternate utilizes an alternate achievement standard; this test is for the most severely disabled students and assesses life skills and functional curriculum essence strands. TAKS Alternate will not be included in this study as this test measures alternate achievement standards which differ from the standards tested by TAKS, TAKS Accommodated, and TAKS

Modified (TEA, 2010). According to Texas Education Agency (2010) school districts may only administer TAKS Alternate to 1% of their total special education population.

Legislative Impact of NCLBA and IDEA

No Child Left Behind and IDEA have greatly impacted education of students with special needs through legislative mandates for accountability standards as well as provisions for serving students with special needs in the least restrictive environment (Ratcliffe & Willard, 2006). Winzer and Mazurek (2000) contend that inclusive schooling is currently a dominant educational discourse. In 2001, President Bush appointed the Commission on Excellence in Special Education (Yell, et al., 2006) to study the condition of special education in the United States prior to the reauthorization of IDEA. The President's Commission on Excellence in Special Education (2001) presented numerous reports, one of which found that before IDEA in 1990, only twenty percent of students with disabilities received an education; leading to changes in how we view the disabled as well as increased access to public schools. No Child Left Behind mandates that all students receive on grade level instruction, with IDEA mandating this instruction in the least restrictive setting appropriate for each special education student (Ratcliffe & Willard, 2006). This stipulation in the law compels educators to open their classroom doors to students with special needs. The law is clear regarding the provision of programs designed to meet the individual needs of students. Inclusive schools provide the individualized approach through the provision of supplemental aids and services designed to support the success of each child (Villa, et al., 2004). When successfully implemented, inclusion provides a continuum of supports which enable students with disabilities to participate and succeed in the general education classroom (Ratcliffe & Willard, 2006; Sacks, 2009). There is a growing body of evidence which supports inclusive programs and positive student outcomes for students with and

without disabilities (NCERI, 1996, Villa et al., 2004). Winzer and Mazurek (2000) provide discourse alluding to the difficult issues surrounding equitable education for all students. They note, however, that while few dispute the right of the learner with special needs to receive a free and appropriate education in the inclusive environment, they compel educators to understand the actual practice is a much more difficult endeavor. While Johnston (1982) cautioned us: “One must not simply present an image of utopia and hope for success”, Smith (2007) relates that utopia is still a distant dream- describing progress toward inclusion in the United States as slow.

The notion of providing access to the general education curriculum has far-reaching implications for teachers; they must accommodate diverse needs and modify curriculum to meet the educational challenges of all their learners with special needs while ensuring mastery of grade level curriculum standards (TEA, 2010). While this concept is not new to teachers, the accountability to grade level content and grade level standards was ushered in with the passage of No Child Left Behind (Ratcliffe & Willard, 2006; Yell et al., 2006). Salisbury and Strieker (2004) point to assessment as a recursive process which provides teachers insight into achievement and instructional needs of all of the students in the classroom. Villa and Thousand (1995) and Villa, et al. (2004) contend the inclusion of diverse populations into the school community results in more effective teaching practices for all students in the school.

The sporadic practice of inclusion has been cultivated among a select few teachers however, the philosophical acceptance of inclusive education has yet to be witnessed systemically across many large, urban school districts. Likewise, Loxley and Thomas (2001) present schooling as existing in a revolution whereby governments around the globe (UNESCO) grapple with social change agendas. Such agendas are clearly witnessed in the form of legislation such as No Child Left Behind here in the United States (Johnston, 1982; Yell et al., 2006).

In spite of legislative mandates the educational system is slow to change. The No Child Left Behind Act was passed in 2001, yet school districts such as Northern Pass Independent School District were just beginning to address access to the general education curriculum for special education students in 2002 and continued with a district wide initiative for inclusion in 2008. Provisions for proficiency on grade level state assessments and the accountability of districts, campuses, and teachers to the mastery of grade level content by special education subgroups have defined the shift from the special education resource classroom to the general education classroom (Sailor & Roger, 2005). Additionally, curriculum and practices which are research based provide a clear rationale for avoiding undesirable outcomes such as school failure and high drop-out rates for learners with special needs (Jones, 2009; Mitchell, 2008).

Why Inclusion?

Current research in the field of education indicates that segregating students is detrimental to the development of their academic and social needs and contributes to the isolation of special learners in broader society (Reganick, 1995; Evans, Labon, & McGovern, 1995; Zions, 2005). Peetsma, Vergeer, Roeleveld and Karsten (2001) compared the academic progress of students with special needs in both the inclusive setting and the special setting and determined that after two years the students made more progress in mathematics in the inclusive setting than in the specialized setting. Visser and Stokes (2003) assert, “Inclusive education, on the other hand, starts from the child’s right to belong” (p. 66).

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Perhaps the most compelling basis for inclusion of all students is one of the fundamental principles of Maslow’s Hierarchy of Needs (Hepworth Berger, 2004; Sacks, 2009); the need of all humans to have caring friendships and relationships in their lives, which rarely

occurs for children banished to an exclusive environment. Villa and Thousand (1995) refer to Maslow's basic premise that all humans must feel safe, valued, and fulfilled in order to live productive lives. Paz (1979) in his research on Mexico and the United States makes the connection between inclusive and exclusive societies; inclusive societies are respectful of differences and exclusive societies cut themselves off from the norm. While the work of Paz is more than a quarter of a century past, current researchers in the field of education (Nicolaidou, Sophocleous, & Phtiaka, 2006) note that social exclusion can be overcome when schools and teachers empower students with disabilities by including them in the general classroom. In research conducted by Reganick (1993) and Berry (2006), it was determined that students with severe disabilities placed in the general classroom indicated increased responsiveness to teachers and students in the classroom. Reganick and Berry reported enhanced participation at home as well as in the community. Meanwhile, general education students indicated an acceptance of disabled students and communicated a greater awareness of the needs of special learners. Classroom practices which support all learners would benefit not only learners with special needs and culturally diverse students, but would enhance the learning of all students in the general education setting (Hammeken, 1996; Rose, 2001; Montgomery, 2001).

While general education students, teachers, and administrators report an overall acceptance of learners with special needs into the general education setting, there remains some doubt as to the degree of impact upon the general education students (Friend & Bursuck, 1996). However, studies of recent years seem to portray a more positive picture for general education students. Farrell, Dyson, Polat, Hutcheson, and Gallannaugh (2007) determined in their study of public schools in England, that the presence of learners with special needs in the general education setting resulted in little or no negative impact upon the general education students in

their shared classrooms; for such a minority of students has negligible effect upon the overall population. An empirical study conducted by Kalambouka, et al. (2007) suggests the inclusion of learners with special needs has no adverse affect on the academic achievement of general education students. While many studies research the impact of inclusion upon students, the perspectives of parents, teachers, and students provide more personal insight into the process of inclusion.

Parental Perspectives

Ideally I want my child to go to school with our next door neighbor...mixing with children that don't have special needs, mixing with the community that he's sort of grown up in and the children that are going to be around him...so what I'm saying is he's going to be able to make new friends with able bodied children...(excerpt from a parent interview, as cited in Cook & Swain, 2001, p. 193)

In the volumes of research conducted into the aspects of inclusive education one will find the widely varying perspectives of parents of children with special needs. Their perspectives cross the spectrum of concerns for their children in general education settings to their experiences with school staff throughout the process. Researchers have discovered (Reganick,1995; Yssel, et al., 2007) that many parents of children with special needs fear teasing and isolation of their children, lack of friendships, and exclusion from after school activities. Paradoxically, some of these same parents fear their child's education will suffer in the general classroom and that they receive better quality instruction in a separate setting (O'Connor, 2007). The isolation of special learners noted by Wang (1992) with negative effects such as stereotyping, low expectations, and low self-esteem has carried forward today with support by parents who fear the inclusion of their children with special needs (O'Connor). Hallahan and

Kauffman (1995) set parameters for the inclusion of learners with special needs in the general setting to include those students with the academic capabilities to work with their general education peers, however, Downing and Eichinger (2003) widen previous parameters to include students with severe disabilities through careful planning for inclusion.

Kniveton (2004) found the perspectives of family members determined if a child was included or self-contained. His research determined that children who were considered a problem by their parents tended not to be candidates for inclusion. He also found that parental attitudes affected their children's attitudes toward students with disabilities. One parent of a child with autism noted a positive benefit of the inclusion of her son with typically developing children:

While taking nothing away from the dedication and quality of his teachers, my child can talk. And there's one reason why he can. It's because of the other children. The typical children kept coming up to him and demanding that he talk...Now I ask you, what teacher or teachers could do that for my son, much less a whole class of kids with autism?
(Winzer & Mazurek, 2000, p. 30)

In an empirical study conducted comparing parents' experiences with schools in the United States and Africa, Yssel, et al. (2007) found that many parents experience frustration with the school staff and alienation in the individual education plan (IEP) meetings where professional jargon and educational processes are foreign to parents. Yssel, et al. contend parents search for the inclusive school for their child and literally knock on doors until one is finally opened to them.

While parents fully understand their child's ability and disability, they often confront teachers who lack the expertise and understanding of developmental disorders, sometimes resulting in a lack of confidence and organizational skill on the part of the teacher (O'Connor,

2007). Parents often exhibit the belief that deficits in their child's learning occur as a result of pedagogical errors as opposed to deficits within their child (Runswick-Cole, 2008) while simultaneously expressing reservations about a teacher's ability to provide appropriate remedial strategies for their child (Carr, 1995; O'Connor, 2007).

Hartshorne and Salem-Hartshorne (2005) remind school personnel that parents face many personal battles when a child is born with a disability. Parents must work through the birth of a child who is not normal and the accompanying grief, as well as their concerns with their child's health and their concerns the future of their child. While collaborative efforts with parents may be difficult and sometimes hostile, they ask that school personnel remain patient throughout the process of working with the parents. The shock and grief which parents experience is poignantly expressed by a parent of a child recently identified as having special needs: "I was sitting, vegetable-like, in a chair, staring at the pattern of the rug, mired in self-pity. Helpless, hopelessly trying to escape our problem" (Osgood, 2008, p. 106).

With the advent of high stakes testing as a result of the No Child Left Behind Act, students with special needs may be caught in the crossfire of high stakes testing and federal accountability (Padilla, 2005). In a system driven by economic forces seeking higher standards parents frequently search for an environment which welcomes students with disabilities (Runswick-Cole, 2008). As parents seek to find inclusive classrooms for their children, they are simultaneously becoming partners wherein they are experts in the welfare of their children while teachers are experts in educating children (O'Connor, 2007). Empirical data collected by O'Connor suggest that parents possess an underlying fear that their child will be 'left behind' when they are unable to keep up with the curricular demands of the inclusive classroom. Tate (1995) illustrates a story of a young boy who was removed from the regular classroom because

the child could not read or learn on the same level with his peers; “To be six and already burned with a brand that never goes away” (p. 13). Parents and children alike fear the ostracism and loss of friendships which may come with the exclusion of students (Yessel, et al., 2007).

Empirical studies have also examined attitudes held by parents of children without disabilities. Kalyva, Georgiadi, and Tsakiris (2007) in their study of Greek parents indicate children with disabilities benefit from interaction with their non-disabled peers. According to Kalyva, et al., parents of students without disabling conditions noted a belief that the quality of instruction in the inclusive classroom would not be impacted by the presence of a child with disabilities.

Teacher Perspectives

Special education needs are a reflection of the organizational characteristics of the educational institution. “Students’ difficulties in learning, the argument goes, arise not out of deficits with the students themselves, but out of the inappropriate responses that are made to those students by their schools” (Clark, Dyson, Millward, & Robson, 1999, p. 1). The development of cultural reciprocity between teachers and parents assists parents in framing disability. Tomlinson (2003) reminds educators to focus on student strengths rather than student deficits when planning instructional activities for a diverse classroom. Murtadha-Watts and Stoughton (2004) pointedly note: “Are we looking for deficits within these children when we should be examining how schools are failing to reach them?” (p. 32).

Empirical studies examining inclusive environments note the difficulties which teachers experience in the provision of inclusive classrooms. In a study conducted by Clark, et al. (1999) in which secondary schools practicing inclusion were studied, the researchers found teacher resistance was noted in all schools studied in spite of the inclusive environment in each of the

schools. Ten years later, Villa, et al. (2005) noted similar resistance among middle and high school teachers in inclusive schools. In a qualitative study conducted by Moen (2008) it was noted that teachers may find themselves focusing more attention on the students with special needs and less on the other students in the class, or diametrically, (Forlin, 2001) the teacher does not have enough time for the student with learning differences because there are so many other students in the class. In a research study by Ali, et al. (2006) it was found that while teachers felt inclusive education was appropriate for learners with special needs there was some disagreement as to the academic benefits of inclusion for both learners with special needs as well as their general education counterparts. In addition, in a study conducted by Forlin, eighty-nine percent of teachers indicated their ability to teach effectively was reduced by the inclusion of learners with special needs into the classroom.

Low academic achievement of special education students is often deferred by teachers to conditions in the students' homes, or to a cultural deficit paradigm (Lareau, 2003). Such patterns of thought affect a teacher's ability to view all children as capable of learning and may be viewed as teacher reluctance to serve students with special needs (Clough & Corbett, 2000). Foster (1986) alluded to a cultural deficit paradigm, and Laureau (2003) earnestly suggests we must consider social and economic factors and further claims that our very social structures are stratified by race, class, language, and gender; and every one of us have subconsciously internalized the ideologies of the dominant culture in which we live. As a result, teachers often blame a student's low performance on the student (Murtadha-Watts & Stoughton, 2004) rather than searching for ways in which to change the curriculum to engage students through the use of a format in which students can access the curriculum. Marzano (2003) cites research which provides evidence that schools impact a mere twenty percent of the variance in student

achievement test scores. He further supports the cultural deficit paradigm with evidence that student background accounts for eighty percent of the variance in student achievement scores. Such figures allow teachers to blame the student for not understanding the content (Gale Group, 2004) instead of providing high-access instruction through optimal learning environments for learners with special needs within the general education setting rather than sending students to be served elsewhere.

The continued practice of pulling ‘underachieving’ students out and serving them in an alternate setting allows the student to be blamed for their deficits (Solomon, Schaps, Watson, & Battistich, 2005). Such belief systems on the part of the teacher suggest little progress in professionals’ attitudes toward inclusion of special needs learners (Runswick-Cole, 2008). While professionals may object to the inclusion of diverse learners (Runswick-Cole), Idol (2006) found just the opposite to be true; in an extensive empirical study in elementary, middle, and high schools, she determined that teachers generally report that students with special needs have a positive impact on other students in classes. Johnston (2006) insists student deficits are created through cultural and ideological beliefs inherent in western middle class society. He further stipulates the organization of our schools, the curriculum provided to students, and the expectations for differing groups are, in reality, part of a larger social construction which ensures social control for some and a definite lack of equity for others.

Student Perspectives

Student perspectives regarding self-contained settings are noted by Mattson and Roll-Peterssen (2007) through a personal student interview: “You felt a bit depressed, you couldn’t quite accept it. You just went there because that’s where you went: ‘I’m going to the special teacher.’ It felt a bit, you know, awkward” (p. 248).

Research in the area of inclusion is multi-dimensional reflecting perspectives of parents, teachers, school administrators, and researchers. While many researchers contend inclusion is beneficial to children (McCarty, 2006) there is limited research reflecting student perspectives about their own inclusion into the general education setting. Only through student interviews have researchers been able to identify the perspective of the student with special needs. Lynn Spradley, a deaf student, communicated her feelings about where she wanted to attend school:

I wanted to go to Berkeley. My parents didn't want me to go away to school. They wanted me to stay at home and attend a mainstream class at a nearby school. But I wanted friends and teachers I could communicate with easily.... (as cited in Osgood, 2008, p. 115)

Mattson, et al. (2007) discovered through interviews conducted with high school students that these students often felt labeled when leaving the general education setting to receive small group instruction with a special education teacher. The research findings of Mattson et al. are aptly summed up by a student interview: "Then the students don't have to leave the class. That's much better. When you've been in a small group, you've felt outside the bigger classes and shut out from the big group" (p. 248).

Clearly, while research highlighting student perspectives is limited, Matson, et al. (2007) allude to an obvious sense of alienation with some diverse learners not included in the general education classroom. Espinoza (2003) draws the link between social identity and self-concept; namely that how we identify ourselves, and the group with which we identify, is formational to our social identity. While some students appear not to be affected by receiving instruction outside of the general education classroom, as formerly noted, other students feel the effects of receiving instruction in an alternate setting (Mattson et al.).

Legal Perspectives

As parents and school districts re-examine their perspectives on the inclusion of students with special needs, the United States Courts have duly influenced the provision of inclusive settings. The U. S. Court of Appeals for the Fifth Circuit handled the landmark case for the inclusion of a student with special needs into a regular early childhood program so that he (Daniel) could benefit from interaction with his nondisabled peers (Walsh, Kemerer, & Maniotis, 2010). Daniel's school district in El Paso, Texas, agreed to the parental request and placed Daniel in the regular early childhood program. However, the teacher and school district later determined that Daniel could not successfully participate in the regular program and conducted the ARD to change his placement in November of 1986. The parents disagreed and litigation ensued, however, in 1989, the Fifth Circuit upheld the school district's decision. Critical determinations regarding least restrictive environment were posed by the Fifth Circuit in the Daniel R. R. case which impact placement in the LRE yet today:

- Can education in the general education setting with appropriate supplementary aids and services be provided satisfactorily? If not,
- Has the school mainstreamed the student to the maximum extent appropriate?

The decisions rendered by the Fifth Circuit in the Daniel R. R. case resound clearly for educators today; general education teachers must be trained, supported, and prepared to work with students with disabilities in the general education classroom. For students who cannot receive an appropriate education in the general education setting, the school district must provide as much opportunity for inclusion as appropriate (Walsh, et al., 2010).

Teaching and Learning

While dated, Goodlad's work in the 1980's shed light upon teaching and learning which schools and teachers still face today: "If teachers in the talking mode and students in the listening mode is what we want, rest assured that we have it" (Goodlad, 1983, p. 229). Goodlad (1984) paints a picture in which students throughout the country are off task and bored with classroom learning, and interestingly twenty years later, the Gale Group (2004) notes that our current instruction of learners with special needs can lead to students acting out, giving up, and dropping out. Teachers fear students who act out, and who have behavioral disorders (Goessling, 2000). The incorporation of engaging curriculum which is tailored to the learning needs and styles of our students is the key to their access of the curriculum and mastery of learning (Gale Group, 2004; Hardin & Hardin, 2002; Villa et al., 2004). Teachers must adopt a culturally divergent view in which they seek to understand and implement curriculum which allows access for learners with special needs as well as culturally diverse students (Montgomery, 2001).

It is suggested by Freire and Macedo (as cited in Murtadha-Watts & Stoughton, 2004) that school leaders must initiate dialogue with all stakeholders to openly share cultural experiences in order to elude oppressive practices both in education and in society. Villa, et al. (2005) insist on collaborative effort between school personnel and the importance of strong leadership by school leaders in the development of effective inclusionary campuses.

Reflective Teaching

Research conducted by Ross, Bondy, and (1993) suggests criteria that teachers embed into their reflective teaching practices for serving all students:

- Is what I am doing working? Should I try another strategy or approach?
- Are my teaching approaches educationally sound? Am I using good pedagogy?

- Are my instructional practices ethically defensible?
- Am I teaching children to participate in a democratic society?
- Am I treating each child with dignity and respect with regard to his/her special needs?

While the questions posed for educators by Ross, et al. are nearly twenty years old, Tomlinson (2003) provides a new perspective to the additional questions we should be asking as teachers:

- Is our curriculum important, inviting, and engaging?
- Do the learning tasks respect each individual learner?
- Is flexible grouping a part of my instruction?
- Am I making decisions based upon student assessment data?
- Do my classroom grading standards reflect student endeavor toward a task?

Teaching for Learning

Schlechty (2001) defines eight shifts in thought and beliefs which are present today and which clearly affect schools:

1. Success for all students: in the past schooling has been for the cultural and intellectual elite. The reason America's schoolchildren are not learning what we want them to learn is that in too many instances they are being asked to do things they do not see as worth doing. Educators must design work that students view as worth doing. Americans consider upward social mobility as a right through education, and indicate a clear bias toward class position. Americans want academic education (not vocational education) which will provide upward mobility for their children.
2. Wide range of parental backgrounds: some parents are older and well educated while some parents are teenagers and uneducated. Less educated parents are sending more

children to school than well educated parents. Poor children are more likely to come from single parent homes. More affluent people are choosing not to have children.

3. Schools which are more controlled by government agencies than by the community results in estrangement from schools and distrust of schools run by governmental agencies. “Parents whose children have no special needs often see federal advocacy for disabled students, especially those with behavioral difficulties, as nothing more or less than a government ploy to force their children to interact on a daily basis with children who are bad and disruptive.” Inclusion is a word which may not resonate well with parents.
4. Loss of community and a general sense of isolation and estrangement from others. Tremendous influence is now witnessed in school boards and local and separate interest groups.
5. Erosion of adult authority in kids lives: Separation of the young adults (teens) from the adults. Teens exist now in a world of their own often separate from the influence of their family and adults.
6. Non-traditional family structures with a shift from two parent homes to single parent and blended families. Changes in the family structure are a part of the larger set of changes in American’s attitudes toward sex, marriage, family, and kinship. Fundamental transitions are occurring and no one really understands the full extent. More affluent parents (usually within the traditional family) have more power than a poor single mother with four children and can influence the decisions made in the schools to reflect their own needs.

7. Electronic industry and entertainment industries now compete for student's attention- and win. Much of what students may believe is not formed by their parents, but by their computer games, IPODS, and television. Sony co-founder Akio Morita declared: "It is our plan to lead the public with new products rather than ask them what kind of products they want. The public does not know what is possible, but we do" (Schlechty, 2001, p. 28).
8. Schools which meet the needs of individual students through mass customization. Diversity must be accommodated and responded to. Schools should define and communicate a common culture to students; one which treats diversity as a common good.

Critics of Inclusion

Children of special education are children of Small Expectations, not great ones. Little is expected and little is demanded. Gradually, these children, no matter their IQ level-learn to be cozy in the category of being 'special'. They learn to be less than they are. (Granger & Granger, 1986, p. 26)

Volumes have been written on the research conducted in the field of inclusion, and critical perspectives in the field have garnered support from parents, teachers, and researchers (Yessel, et al., 2007; O' Connor, 2007; Runswick-Cole, 2008). A bulletin by the National Center on Restructuring and Inclusion (1996) highlights some common concerns held by critics of inclusion which still resound today:

- Schools take a one size fits all approach.
- Inclusion may be beneficial for disabled students but is harmful for non-disabled peers.

- Children with disabilities have special needs which are served best in another setting outside of the general classroom.
- Teachers are unprepared to teach in inclusive environments.
- Teachers should maintain the right to refuse to teach disabled students.
- School districts will fund inclusion initially and then remove funding.
- Inclusion is a way for districts to save money.
- Least restrictive environment should apply only to socialization periods, and not to academics.
- Inclusion is motivated by administrators with intangible dreams and emotionally charged parents.
- Inclusion will eventually destroy our educational system.

Shriner and Skrtic (2005) note the concerns that special educators hold regarding inclusion:

- Special education teachers lack campus level and district level support with the inclusion of special needs students into the general education classroom.
- Special educators are planning collaboratively with general education teachers and remain isolated from their colleagues.

Parental Perspectives

If your child functions far below the normal child intellectually, academically, and socially, does it make sense to insist that he or she be ‘included’ in a regular classroom? Certainly not, in my view, and in the view of many, if not the vast majority, of parents of autistic children. (Rimland, 1995, p. 290)

One fear manifested by parents of students with special needs, such as Wright (2001), portrays special learners being placed full time in the general education classroom with any supports the

student may need being brought into the classroom. However, Wright believes that full inclusion may be counterproductive to children who could benefit socially and academically from the self-contained setting and full inclusion would actually deny a special education student appropriate instruction. Mayrowetz and Weinstein (1999) and Friend and Bursuck (1996) further validate the concern with placing students with special needs into the inclusive setting when their need may require a more restrictive setting. In the years following these dated publications, researchers in the field of inclusion seek to allay such fears. Webber (2005) advises the use of responsible practices when integrating students into the general setting and contends that much controversy swirls around practices which do not consider the needs of the students before all else. Villa and Thousand (2004), Villa et al. (2005), and Tomlinson (2003) insist upon curriculum which focuses upon student needs and interests and the collaborative planning of general education teachers, special education teachers, and service providers when planning instruction designed to meet the needs of diverse learners.

Teacher Perspectives

More than fifteen years ago, Hallahan and Kaufman (1995) noted the perspective that general educators were less able to work with special learners and the demands upon teachers were so great that they were overwhelmed with providing appropriate instruction for a population of students with diverse social, emotional, and educational needs. They rallied for a service delivery model which provided more special education support, less general education support, and collaborative planning time. While dated, the concerns noted by Hallahan and Kaufman in 1995 still resound today in empirical studies examining the effects of inclusion upon learners with special needs. Farrell, et al. (2007) indicate through their study in English schools, that while the idea of inclusion is well supported by administrators, teachers, and parents, there is

much less support for the actual practice of inclusionary classrooms. While parents support the practice of inclusive environments for their children, they note the potential hindrance a child with disabilities may pose for a general education classroom (O'Connor, 2007).

In a study conducted by Rose (2001) through interviews of teachers regarding the conditions necessary for successful inclusion, one teacher noted: "I also have a concern for all the other children in the class as well, because if a teacher is having to spend so much time with one child, it can be at the expense of other children" (p. 151). Rose determined through the study that twenty-five percent of teachers felt learners with special needs consumed too much time. The exclusive attitude of general education teachers is noted by Broderick, Mehta-Parekh, and Reid (2007) whereby they assert that inclusive education evolved from special education and is, by association, rooted in disability.

Student Impact

The social and affective outcomes of inclusion upon special education students have been studied by Frederickson, Simmonds, Evans, and Soulsby (2007). Their empirical study determined that students with special needs who have been included into the general education classroom demonstrate poorer social and emotional outcomes than their general education peers. In addition, Frederickson, et al. found included special learners have lower social status than their general education peers. They emphasize the importance of a systematic plan for inclusion which promotes positive social and affective outcomes for students. Karten (2008) reminds schools that lacking the proper preparation, attitudes, and scaffolding of student outcomes, inclusion could be embarrassing and frustrating for special learners who demonstrate behaviors falling outside the parameters of socially acceptable.

Social Ecology Model

Bronfenbrenner (2005) iterates the concept that developmental outcomes are heavily influenced by the levels of the ecological system. Children from different cultural and social arenas develop characteristics reflective of the ecological environment in which a child is raised; the neighborhood, school, family, religion, and social class all work interactively to develop the individual person. A child's family, social class, religion, and neighborhood can enhance or inhibit a child's development over time. Interestingly, settings such as the home and the neighborhood tend to be very similar within cultures, but vary greatly across cultures. Within a given society or social group, the systems tend to appear congruent. However, across cultures, the systems vary dramatically. The blueprint of an individual's culture and socio-economic status work to produce correspondingly connected behavior and development within that system.

“Social development applies not only to the individual but to the social organization of which he is a part” (Bronfenbrenner, 2005, p. 16). The individual influences the environment while the environment influences the individual. Stability and continuity in individual development occur when there is a correlation between external and internal structures. The interdependence of events, both within and without a child, determine continuity or discontinuity of development. Social development is ever changing and difficult to grasp; as the individual develops within the group or environment, the environment changes and develops in response to the individuals within. The interactive connection between the child and the family was noted in 1986 by Bronfenbrenner: “that when a family member is born with or diagnosed as having disabilities, other family members assume new roles and the family system reorganizes...” (as cited in Argus-Calvo, 1999). Bronfenbrenner supports the notion that the social policy affects

students and, likewise, students affect social policy. The two continually respond to one another and evolve over time.

The evolution of a social ecological model began with Bronfenbrenner's work in 1979 and was further supported by Zigler and Hall (1995) as requisite to a more sophisticated approach to teaching students with disabilities. The work of social ecologists such as Bronfenbrenner (2005) continue to suggest all systems in society are relevant to learning and supporting students, and as such, must all exist and work together to produce socially competent and independent adults for society.

Learning and Social Ecology

Learning may be defined by one's competence. Competence may be determined by society as an achievement; graduation, number of years of education, and so forth. Competence may also be defined within the environment by individuals who are responsible for evaluating the individual's learning. Grades in school, test scores, and evaluations of student mastery serve as examples of competence within the environment. Such evaluations of individual development shape further development by enhancing opportunities or by limiting them, either externally through social opportunity, or internally, through the individual's perception of their own ability (Bronfenbrenner, 2005, p. 123.)

Competence, or learning, may also be defined through mastery of culturally defined tasks. Society determines the learning tasks which are of value, and gives significance to the achievement of determined tasks. Differing environmental demands produce differing developmental outcomes, or abilities. Gay (2002) supports the notion that culture anchors and blinds society by proving definitions of norms while simultaneously blinding society to the cultural roots of behavior and learning. As such, Gay suggests that schools are conditioned to

search for deficits in students rather than differences inherent in human beings and attributes over representation of students of color in special education programs to culturally defined constructs in American society. Vygotsky (as cited in Bronfenbrenner, 2005) states:

In the process of development the child not only masters the items of cultural experience, but the habits and forms of cultural behavior and cultural methods of reasoning. We must, therefore, distinguish the main lines in the development of the child's behavior. First, there is the line of natural development of behavior which is closely bound up with the processes of general organic growth and maturation of the child. Secondly, there is the line of cultural improvement of the psychological functions, the working out of new methods of reasoning, the mastering of the cultural methods of behavior. (p. 124)

Luria (as cited in Bronfenbrenner, 2005) further supports the concept of culturally defined competencies: "Society organizes the kinds of tasks that the growing child faces and the kinds of tools, both mental and physical, that the young child is provided with to master those tasks" (p. 124). The social ecology model developed by Bronfenbrenner (2005) compels educators to examine every student through a lens which allows for individual differences and cultural foundations. Such a focus on the development of the student as linked to their personal history indicates an evolutionary journey for educators, parents, and students from a bleak and dismal beginning to a more sophisticated and enduring acceptance of individual accomplishments.

Historical Perspective of Special Education

Many complex threads-social, political, economic, and even religious-must interweave to create a propitious climate that respects the rights of all individuals in a certain society....Discovering who was taught, and when and how, is related far more to the

social, political, legislative, economic, and religious forces at work in a society than it is to the unique social and educational needs of disabled persons. (Winzer, 1998, p. xi)

The journey of individuals with special needs in society, as portrayed by Winzer in 1998, provides a three dimensional melodrama of the lives of the disabled throughout history. The historical pageant of the journey of the disabled in society is fundamental to the conceptualization of the education of our learners with special needs today. Tyack (2003) supports the value of understanding history: “Without a sense of where we have been, it is easy to lose the way ahead” (p. 6).

Early Societies

The passage of time has witnessed the journey of people with exceptionalities. Greek society was concerned with determining soundness of mind only for the purposes of determining how a person should be judged before the law. The Greeks created a legal system which allowed guardianships for special needs individuals and set a precedent for centuries of decision making regarding disabled persons. Roman law, as well, provided for guardianships for those who were judged intellectually deficient. They also determined that people who were born deaf but had acquired speech were considered legally capable of participating in society, but people born deaf who remained mute were judged incapable of participating in legal society and were grouped with the insane and infants (Winzer, 1998).

In 533, the Code of Justinian (Winzer, 1998) defined the rights and responsibilities of those with disabilities. By Justinian law, lunatics and idiots were not capable of committing to marriage, and a man with an insane heir was allowed to substitute an heir in the insane family member's place. Justinian's laws remained in place to influence law throughout Europe. From

the sixth century to the mid-eighteenth century, the laws of Justinian prevailed in the treatment of disabled persons.

Medieval Views

During medieval times when religion greatly affected the attitudes of society, the handicapped were given little consideration (Kuntz & McNealey, 2010). In thirteenth century England, Catherine, the deaf daughter of Henry III, was described as ‘dumb’ and deemed not fit for anything (Winzer, 1998). During this time the behavior of the mentally retarded and insane was considered evil; the influence of the devil. Sixteenth century Germany saw mentally retarded persons locked up in a tower deemed the ‘Idiot’s Cage’ (Burdett, 1891, as cited in Winzer, 1998). Life in medieval times was precarious for the disabled; although the generosity of churches was extended to the disabled there was no social assistance for this group.

The fourteenth century obsession with sin and evil inspired witch hunters to seek out the mentally and physically handicapped. The mentally ill were exorcised and drugged, and when their mental condition remained unchanged, it was determined that their disease was caused by the devil. In 1882, Tuke (as cited in Winzer, 1998) claimed that many disabled persons declared as being possessed by the devil, were in fact disabled persons with neurological or emotional disorders.

The Renaissance

The Renaissance period ushered in a more humane view of life. The focus on the human individual and meaningful life brought medical advances. The invention of the printing press by John Guttenberg spread the printed word and the availability of reading material helped to develop literacy in Europe (Winzer, 1998). In the seventeenth century the insane and mentally ill were viewed with contempt and fear. The insane, especially those who were angry, threatening,

and maniacal were considered the most dangerous (Doermer, as cited in Winzer, 1998, p. 29). This period in history gave rise to madhouses, bedlams, and hospitals for lunatics. This century reflected society's need to be protected from deviant individuals among them which sparked the confinement of mad and insane people (Stainback & Stainback, 1995; Osgood, 2008). While madmen were caged and exposed to the abuses of a paying public, cruel treatment of people in the lunatic hospitals was commonplace and mirrored society's attitude toward the disabled. Doermer (as cited in Winzer, 1998) illuminates the attitude in lunatic hospitals of the time: "Let the diet be slender and not delicate, their clothing coarse, their beds hard, and their handling severe and rigid" (p. 31).

The latter part of the Renaissance brought the development of the first principles of special education. Deaf people were the first to be given educational opportunities, followed by the blind and, much later, the mentally retarded. Renaissance Spain and the inheritance laws affecting the Spanish aristocrats provided the impetus for education of the deaf. In 1578, Pedro Ponce de Leon, a monk, was responsible for the instruction of the deaf sons of wealthy Spaniards. His success in training these young deaf boys allowed the boys to remain legal heirs and deemed Ponce de Leon as the first special educator (Winzer, 1998).

The emphasis on language in seventeenth century England brought the training of the deaf, mute, and blind to the forefront. These early attempts at bringing communication to those handicapped by deafness signaled a change in the attitude of society toward those in society with special needs.

The Enlightenment

The eighteenth century, and the age of Enlightenment ushered in a new era in the education of the special needs populace. French philosophers assumed the natural goodness of

individuals and the protection of natural rights (Winzer, 1998). Methodologies for working with the deaf, such as sign language and raised print for the blind opened the door for educating the mentally retarded. The superstitions of the past began to be replaced by a more humanistic approach focused on understanding the human mind.

The work of John Locke, physician and philosopher, profoundly influenced the education and treatment of individuals with special needs. Locke rejected the inherent, innate traits of man with his concept that the individual is born a blank slate- *tabula rasa* (Winzer, 1998; Hepworth Berger, 2004). Such a provocative notion suggested human capacities (and incapacities) were not innate, but, instead, developed through experiences; allowing for the notion that people with disabilities could be trained and educated.

The social and physical conditions manifested throughout time influenced the attitudes and treatment of special individuals in society. Circa 1800 the life expectancy of an adult was thirty-five years; such a short life span being affected by plague, disease, malnutrition, and unsophisticated medical treatment. As a result of plagues and disease, minor disabling conditions were rampant. In addition, social conditions were quite different from those today; illiteracy was as common among the wealthy as it was among the poor (Winzer, 1998). Although school was considered important in the development of the child, literacy was not a central requirement for children until the nineteenth century.

No formal education for the disabled came into existence until the mid 1700's. Renaissance philosophers began to focus on the teaching of the deaf, mute, and blind. The development of sign language for communication occurred during this era. The treatment of the mentally ill and the physically handicapped continued to be cruel and debasing in the institutions to which they were banished. In the late eighteenth century a French physician by the name of

Philippe Pinel proposed the concept that mental incapacity is caused by society's failure to provide for the mental health of its members (Winzer, 1998). Pinel fought for equality and liberty for the insane as he further defined the levels of mental insanity.

In the Northwest Ordinance of 1787, Congress wrote "Religion, morality, and knowledge, being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged" (Tyack, 2003, p. 16). Benjamin Rush (Tyack, 2003) argued that the best way to "render the mass of the people more homogeneous, and thereby fit them more easily for uniform and peaceable government" (p. 19) was to create schools that inculcated republican principles and attributes of character. "I consider it possible to convert men into republican machines. This must be done, if we expect them to perform their parts properly, in the great machinery of the government of the state" (p. 19). Horace Mann captured societal views on education during this period: "Education then, beyond all other devices of human origin, is the great equalizer of the conditions of men- the balance wheel of the social machinery..." (as cited in Tozer, Violas, & Senese, 1998, p. 268).

"Before 1800, disabilities were believed to be imprinted on one's soul by nature, God, or the devil..." (Winzer, 1998, p. 280). Hardship was a way of life for adults and children alike, and this hardship was even greater for individuals with special needs. Pre-modern times witnessed vast numbers of handicapped individuals; deaf, blind, insane, and with physical or mental anomalies. During this period in history persons who were unable to participate normally in life were considered a public threat or were looked upon as evil creatures. Such societal attitude led to cruel treatment of individuals with disabilities and they were routinely subjected to starvation, exile, and death; for such a group were not considered deserving of social or legal attention in society (Winzer, 1998).

Early proponents of public education disagreed over the purpose of education, and men such as John Mills (Tozer, et al., 1998) insisted that public education be secular education providing children with the fundamentals of religious values. Orestes Brown affirms this eighteenth century paradigm: “Man has a destiny, an end he should seek to gain, and religion is the answer to the question...education, then, to be complete, to be what it ought to be, must be religious” (as cited in Tozer, et al., p. 138).

The late eighteenth century in England witnessed a harsh evangelistic treatment of individuals with disabilities. The insane continued to be inhumanely mistreated in the insane asylums (Bedlam), and such reports resulted in the passage of the English Lunacy Acts in 1828 and 1844. These acts provided asylum as the accepted form of providing for people with mental illness. Winzer (1998) iterates the historical chronology of the education of people with special needs; the treatment of the mentally ill led to the education of the mentally handicapped. Provisions for the treatment of the mentally ill occurred with the passage of the Lunacy Acts in 1828 and 1844; subsequently the educating of the mentally ill in England began with the first school for the mentally retarded in 1846. Institutions dedicated to educating people with special needs were established at that time (Osgood, 2008).

European educators of the time, such as Johann Pestalozzi and Jean-Jacques Rousseau worked for child centered education which was based in positive, encouraging attention to children. Some credence to recognizing the individual differences in children was developed as a result of their work (Osgood, 2008).

Colonial England

Life in the Colonies was rapidly developing and the means for establishing rules was highly regarded as a necessary foundation for the colonies: “The rapid development of

institutions (in the 19th century) may be viewed as a mechanism for ordering society, for fostering a more sophisticated control, especially of the lower classes...from which many special children came ” (Winzer, 1998, p.79).

While England was establishing institutions devoted to educating people with disabilities, a new America was settling in the Colonies. For many years after the American Revolution, political and educational leaders sought to balance liberty and order and to instill uniform republican values through schooling. They worked to develop the underlying principles of a republican education. Time witnessed differences among religious sects struggling to assimilate strangers into the Anglo version of America. Americans have strongly believed in the power of civic education to change people, and the schools have been the change agent for such endeavors (Tyack, 2003).

The influence of French philosophers and English law concerning the treatment and education of individuals with disabilities was apparent in the American educational system in the early nineteenth century. The free public educational system formed for regular education extended into the development of facilities for special education as well and the education of the disabled coincided with vast social reform and the expanding educational system of the time (Winzer, 1998). The philosophical beliefs of Horace Mann in his establishment of the common school provided the backdrop for the separate school for students with disabilities (Osgood, 2008).

Horace Mann proposed a common school in which all children within society would have the opportunity of an education (Tozer, et al., 1998). The founders of our nation were convinced the republic could survive only if its citizens were properly educated (Schlechty, 2001). Mann felt that the role of the common school, a public institution which mixed students from all walks

of life, was to teach a common denominator of political and moral truths both non-partisan and nonsectarian. Finding a neutral common ground proved to be quite difficult for religious and political factions during this era.

Only if the common school could produce worthy citizens would the nation's future be safe and in a society rife with conflict and competition, all children had to be taught the values they should hold in common. However, agreement upon exactly what should be taught, and how it should be taught created conflict through the years. "Trying to find a creative balance in civic education between commitment to democratic processes, common values, and respect for differences continues to be an enduring tension in schools for citizens" (Tyack, 2003, p. 37). Mann even proposed a system where assessment results were publicly acknowledged by "publishing school by school results in the newspaper, holding teachers and administrators accountable for poor results, and distinguishing between lower and higher thinking skills in the curriculum and examinations" (Madaus & Dwyer, 1999, p. 5, as cited in Schulte, 2000, p. 30). Thomas Jefferson, in 1779, sought to include children from poor families into the common school in an effort to provide an education to the poor as well as the wealthy. However, wealthy parents prevented the inclusion of poor children as they did not wish to pay taxes for the poor to receive an education (Winzer & Mazurek, 2000).

For many years after the American Revolution, political and educational leaders sought to balance liberty and order and to instill uniform republican values through schooling. Time witnessed differences among religious sects struggling to assimilate strangers into the Anglo version of America. Americans have strongly believed in the power of civic education to change people, and the schools have been the change agent for such endeavors (Tyack, 2003). Nearly one hundred years ago, John Dewey (as cited in Butts, 1978) articulated the issues we still face

today: “The power of the public schools to assimilate different races to our own institutions, through the education given the younger generation, is doubtless one of the most remarkable exhibitions of vitality that the world has ever seen” (p. 239).

The 1800’s

Thomas Jefferson was highly involved and dedicated to the establishment of the country and firmly believed in the rights of the people:

I know of no safe depository of the ultimate powers of the society but the people themselves, and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion by education. (Thomas Jefferson, as cited in Tyack, 2003, p. 9)

New York Governor DeWitt Clinton declared in 1822: “The first duty of a state is to render its citizens virtuous by intellectual instruction and moral discipline, by enlightening their minds, purifying their hearts, and teaching them their rights and obligations” (Tyack, 2003, p. 9).

Nineteenth century public schooling witnessed cultural wars between Protestants and Catholics.

In 1844 in Philadelphia, the Catholic bishop requested that Catholic children be allowed to use the Douai version of the Bible. A Protestant mob attacked Irish Catholics and burned their homes and churches in response. Protestant reformers could not understand why their proposal of nonsectarian and nonpartisan schooling was not acceptable to all right-thinking people, while the Catholics viewed this as a power play. The late 1870’s saw much dissention between Protestants and Catholics over the purposes of schooling and enrollment in Catholic parochial schools rose in those years. In 1900, a Kansas Protestant proclaimed, “Americanism is Protestantism... Protestantism is Life, is Light, is Civilization, is the spirit of the age... Education with all its adjuncts, is Protestantism” (Tyack, 2003, p. 24).

The nineteenth century also witnessed ethno-cultural disputes as immigrants protested stereotypes in textbooks. The common school was created to attract all children (save children with special needs), to the public schools, including immigrants. Cultural pluralism began to be an issue as different cultures insisted upon textbooks in their native language. By 1900, some immigrants were able to attend classes in German, Italian, and Polish.

In Boston, in 1879, the first signs of special classes took root with the development of the ‘ungraded’ class in schools. This class was the place where struggling students were sent who were older, or who were just beginning to read and write, as well as a place where students exhibiting behavioral differences were sent (Osgood, 2008).

While there remained resistance to allowing public schools to accommodate language different learners, the schools still maintained their original role; to assimilate all children to a common American education which would produce good republicans (Tyack, 2003). The assimilation, and later, inclusion into the general mainstream was first awarded to Blacks, then the disabled, and finally non- English speakers (Broderick, et al. (2007).

The influence of eugenics and the scientific belief that heredity was the main factor influencing development, and the advent of social Darwinism which ordered people, culture, and society around ethnocentric foundations contributed to the attitude toward the disabled:

Humans have the urge to stratify plants into weeds and flowers, dogs into purebreds and mongrels, and humans into superior and inferior races. Groups contend with one another for advantage in education, and educational institutions have produced categories of people who are winners and losers. (Tyack, 2003, p. 69)

Differences were noted among individuals and heredity was blamed for differences in people (Winzer, 1998; Clough & Corbett, 2000). Larger facilities were built to house the socially and

physically inferior and testing was performed to identify genetically defective individuals. In 1891, Sir Francis Galton rallied for the sterilization of those members of society who were unfortunate and less affluent (Winzer, 1998).

The nineteenth century witnessed vast numbers of immigrants arriving in the United States, and with them, great poverty, vice, crime, ignorance and lunacy (Winzer, 1998; Osgood, 2008). The public demanded government action and social reform. Organizations began to devote themselves to educating the poor, the immigrant, the sinful, and, to some degree, the disabled. Educational reformers of the day were concerned about the condition and treatment of disabled individuals as private education was not available to the masses (Osgood, 2008). Most disabled people were left to 'their ancient doom of wretchedness and degradation' (H.P. Peets, as cited in Winzer, 1998, p. 93). The use of the medical model to identify and categorize children with disabilities provided justification for separate institutions which were the answer to educating children with disabilities.

Curriculum in the nineteenth century revolved around educating, evangelizing, and elevating industrially (Winzer, 1998; Osgood, 2008). The factory influenced education, and children were trained to be factory workers. Literacy was not valued as much as the ability and skill to work in the factory. It was vital during this period that students with special needs receive the training they needed to work in society (Osgood, 2008).

The mentally retarded were educated in separate schools which employed the physiological method of Rousseau and Seguin (Winzer, 1998). This method was based upon individual assessment and was highly structured and multisensory. In addition, their training included self-help and functional living skills. However, it would be another century before the term 'emotional disturbance' would replace the labeling of children as insane and mad (Osgood,

2008). Hepworth Berger (2004) notes the work of Itard during this era and his work with the Wild Boy of Avignon whose window of opportunity for acculturation and intellectual development had closed by the time they found him living in the wild at the age of twelve.

For much of the nineteenth century, the mentally and physically handicapped were often exhibited in circuses and carnivals. These exhibitions were wildly popular and universally accepted as entertainment for all classes. Scientific theory of the time supported the displaying of the disabled as evolutionary throwbacks (Winzer, 1998). Interestingly, while the nineteenth century brought great advances in the education and care of special individuals, the public still retained an unsophisticated view of their place in society. Special education was seen as an institution which was segregated and “less interlinked with society at large than any other” (Rae, 1847, as cited in Winzer, 1998, p. 227).

Alexander Graham Bell was responsible for introducing the first students with special needs into the regular school when he advocated that the disabled had a right to be educated in the public school (Winzer, 1998). Bell asked that deaf children be allowed to enter the public school:

A small room in a public school can be set apart for the use of the deaf children of the neighborhood... There is no reason in the world why a deaf child might not join a class of hearing children when instruction is given in such studies as map-drawing, writing, drawing, etc. (A.G. Bell and Gillett, 1884, as cited in Winzer, 1998, p. 318)

While ethnic lines were drawn and individuals segregated based upon ethnicity, the dawning of a new day had begun with the invitation of deaf children into the public school. During this time period in the El Paso border region, school children faced the same issues. Rippberger and Staudt (2003) describe the first public schools in El Paso in 1881, just a few years after the

establishment of El Paso City in 1873, noting there were separate schools for African American children (Douglass Colored School) and Mexican American children (Mexican Preparatory School). El Paso was consistent with the prevailing attitude of the times across the United States. In Boston, in 1877, the Horace Mann School segregated their students in a separate facility in the city (Osgood, 2008).

1900-1950

Early 1900 witnessed the founding of a Department of Special Education by the National Education Association (NEA). This department was formed specifically to allow educators to network, exchange ideas, and discuss best practices in special education (Osgood, 2008).

In 1909, Ellwood Cubberly (Cubberly, 1916) determined that southern and eastern Europeans were a different breed. A new breed of moral evangelists appeared to advocate for the good of society and the well being of the disabled. They influenced social constructs to consider the scientific theory in shaping future citizens.

Education has paralleled societal needs and views regarding the purpose of education. Industrialization brought the need for quality of production, which in turn, influenced the schools to produce workers for society and children were educated for the purpose of becoming productive workers in society (Osgood, 2008). In 1914, the U. S. Bureau of Education declared in a bulletin: “The state maintains schools to render its citizenship homogeneous in spirit and purpose. The public schools exist primarily for the benefit of the state rather than the benefit of the individual” (Tozer, et al., 1998, p. 110).

Attention to the education of special needs students was brought under the spotlight by New Jersey Superintendent Johnstone in 1912 when he advocated for the inclusion of special learners into the public school:

I believe that the time has come for the commonwealth to recognize that every child is entitled to such education as is best suited to his needs. This means that special classes....must be established under the school authorities. The blind, the deaf, the cripples, the incorrigibles must someday take their place in the life of the commonwealth with normal people. Therefore they at least must have training in the public schools to keep them from becoming institutionalized and thus losing touch with normal community life. (Vineland, as cited in Winzer, 1998, p. 327)

During this time period, Americans were constantly reminded of the threat of feeble-mindedness and the principles of hereditary determinism. Through a lens of genetic determinism, they divided classes which proceeded at different rates, differentiated the curriculum, and created a testing system for sorting and tracking students (Winzer, 1998; Osgood, 2008). They believed this system to be one in which children were provided equality of educational opportunity. Based upon the previous work of Itard, Alfred Binet and Theodore Simon developed the first intelligence tests in order to cull out retarded children and to place other children at their appropriate grade level during this period (Gardner, 1983; Valle & Conner, 2011). Edward Thorndike further supported IQ testing measures through his emphasis upon student measurement and curriculum supporting the three R's (Winzer, 1998). The Progressive movement of this time underscored society's need for students to receive instruction and training to enter an urban industrialized society as an adult. The emergence of John Dewey and his focus on developmental psychology were accepted by special education teachers. However, teachers of the time noted that many of the traditional classroom practices were not effective with the special education population.

From 1900-1950, the labeling of students was a solution for serving students who were not smart enough for the general system, and allowed children to be given a place in society, whatever their abilities. Following on the heels of his predecessor, and retaining the same attitude toward the inclusion of special needs individuals, David Corson, superintendent of schools in New Jersey, 1920 reported:

All children are not born with the same endowments or possibilities; they cannot be made equal in gifts or development or efficiency. ..There are in the schools tens of thousands of children over age physiologically, but only five, six, or seven years old mentally. The educational system must therefore be adjusted to meet this condition, so that the democratic theory of 'equal opportunity' for all may be fully exemplified as well as preached. (Tyack, 2003, p. 119)

In contrast to the New Jersey superintendent, the superintendent of the Indiana schools, Dr. George Bliss, also wrote in 1920:

We need a social conscience that will not tolerate feeble-minded children in the public schools, but will demand either their segregation in special classes, or their removal to a suitable institution for their education and care. Defective children in the public schools are not only a burden to a conscientious teacher, but as they develop into puberty may be a positive menace to the discipline and morals of any schoolroom. (Osgood, 2008, p. 44)

Corson, the New Jersey superintendent in 1920, believed in diversifying the curriculum, and tracking of students. Mental capacity was then the determinant for future opportunities. Genetic determinism influenced educators to believe that education could help the disabled only to a very limited extent. Individual ability and capacity were linked to individual deficits rather than being linked to teaching and learning (Clough & Corbett, 2000).

Categories of children broadened and special classes were formed to serve children labeled as deaf, undernourished, crippled, mentally retarded, speech defective, gifted, and blind. Special settings were formed and special teachers were hired to work with the different classifications of students in the public schools (Winzer, 1998; Osgood, 2008). Rothstein (1998) illustrates a tale of Italian immigrants in New York City in the 1930's. These Italian immigrants were labeled 'retarded' based upon IQ testing administered them in a foreign language (English). Our public schools have been designed to serve a particular type of learner, and systematically excluded learners who failed to fit the defined mold.

Educators and parents alike believed special classes and specialized settings for students provided the maximum educational benefits for children. These segregated classes touted lower teacher-student ratios and greater individualized instruction with the hope of eventually enabling students with special needs to join the regular classroom (Winzer, 1998). By 1927, there were a reported four thousand special classes for some seventy-eight thousand mentally challenged children throughout the United States (Osgood, 2008). Parents differed in their approach to the Development School (Osgood, 2008). Some mothers expressed a desire to have their sons educated in the 'democratic way', while other mothers, such as one in California, who vehemently opposed the Development School for her mildly challenged son:

'You can't put my Tony in the dumb-bell school.' The irate mother spat the words out at the principal and the teacher who were trying to persuade her that her son would get the training he needed at the near-by Development School. (Osgood, 2008, p. 17)

By 1930, sixteen states had passed legislation requiring special education (Winzer, 1998). Compulsory attendance laws in combination with societal changes in attitude toward the education of the handicapped brought greater numbers of special students and immigrants into

the public schools (Stainback & Stainback, 1995); Osgood, 2008). As a result, greater attention was given to the special student and the immigrant student who were often categorized as needing the specialized setting.

In 1930, President Herbert Hoover hosted the White House Conference on Child Health and Protection. This conference highlighted a special education report and brought legitimacy to special education in the public school system. The Children's Charter was a major outcome of this conference which focused on public provisions for students with disabilities:

For every child who is blind, deaf, crippled or otherwise physically handicapped, and for the child who is mentally handicapped, such measures as will early discover and diagnose his handicap, provide care and treatment, and so train him that he may become an asset to society rather than a liability. Expenses for these services should be borne publicly where they cannot be privately met. (F.E. Howard, 1935, as cited in Winzer, 1998, p. 368)

The attention given to special students brought focus to the mental health of students. The public school was spotlighted as the 'fertile and untouched field of mental hygiene work' (Cohen, 1982 as cited in Winzer, 1998, p. 349). Specialists in the field of education advanced instructional practices in the classroom to further reflect an understanding of differing disabilities and techniques more appropriate to learners with special needs. The professional development of special educators working with students with special needs was a particular focus during this era, providing teachers with strategies for working with special students (Osgood, 2008). The contrast between the instructional practices of the era, and the impetus for special education of the future was well expressed by Mayhew Mantor in a poem he wrote in 1934:

"When I don't catch on at once,
People says I'm just a dunce.
I cain't help it 'cause I'm dense
And was borned without much sense.

You-all that is quick and smart
Had an awful big head-start
On we foolish, stupid folks
That you laughs at in your jokes.
If a feller ain't so spry
In his head, though he does try;
If he ain't got enough brains
To come inside when it rains;
Or if he don't know 'straight up,'"
No more than a cat or pup-
Cain't tell what it's all about-
It don't do no good to shout
At him when he gits things wrong;
That ain't he 'pin' him along.
You ain't got no call to sneer
At him 'cause he ain't "all there":
If you wasn't lucky, you
Might be simple-minded too." (Mayhew Mantor, 1934, as cited in Osgood, 2008, p. 79)

1950-1960

In the 1950's, educators sought to ignore class and race differences by treating everyone equally and defining a political and economic consensus which unified the nation (Tyack, 2003). Racial desegregation shed light upon inequalities for blacks and affected exclusionary practices and paved the way for policies impacting students with disabilities (Stainback & Stainback, 1995).

Tyack (2003) noted that schooling in the 1950's saw racial segregation, unequal opportunities for women, textbooks which focused on the white male, and prayer in the schools. The ensuing years brought racial desegregation, more opportunities for women, textbooks which began to show racial variation, and the end of prayer in schools. Activists formed social movements that challenged entrenched power and belief systems in America (Tyack, 2003). Writers of school textbooks, in keeping with the ideals of our founding fathers, have continued to instill a patriotic narrative, however there has sprung up contention over whose values and narrative should be presented as the American narrative: "What history can do for citizens and

educators who want to reflect on schooling is to provide a broader and deeper context for preserving what is good from the past, interpreting the present, and anticipating alternative future” (Tyack, 2003, p. 6).

According to Tyack (2003) American’s political philosophy of the purposes of education has long been debated. For hundreds of years we have debated the value of political uniformity and diversity, individualism and group identity, liberty and order, freedom from the state and freedom for the state to socialize the young. Today we debate a curriculum which values cultural identity while teaching fundamental patriotism and common values.

The period from the 1950’ through the 1970’s witnessed different social climates in schools as a result of wars during this period. Education moved more to English only conservative views and great gains were made in the perception of human learning. Jean Piaget’s work turned educators toward the cognitive theory of acquisition of learning through the construction of knowledge while Vygotsky insisted learning is inseparable from social and cultural influences (Winzer, 1998). Americans struggled with determining the most appropriate educational setting through policies, practices, and services for students with different needs (Osgood, 2008).

The 1950’s also brought a movement in which children were less blamed for a cultural deficit, and the schools were called upon to adapt the school better to the child rather than blaming the child. As protest groups demanded social justice, educators provided compensatory programs, remedial programs, and assistance to children who were different. Common views of social justice were examined parallel to civil rights (Winzer & Mazurek, 2000). Critics began to examine over-representation of groups in compensatory and remedial programs. During this decade, the right of children with disabilities to be educated came to the forefront when the

Association for Retarded Citizens supported the Education Bill of Rights for the Retarded Child, and as a result, the school system registered thousands of students with special needs (Wright, 1999). Harrison Allen Dobbs, a professor at Louisiana State University in the 1950's, wrote numerous articles expressing the view that disabled children could contribute to society and should not be labeled as handicapped, but should be given the respect and dignity of any citizen (Osgood, 2008). Hobbs' work contributed to a change in the social perception of disabled individuals which encouraged better care and treatment of the disabled. Attention was given to the process of assessing children and classroom practice, pedagogy, and curriculum were addressed to meet the needs of students assessed with disabilities (Winzer, 1998; Osgood). Parents lobbied for separate institutions specializing in working with children with disabilities and society responded to this demand as the era witnessed the continued use of specialized instruction delivered in segregated settings for education of the disabled (Osgood).

The plight of the disabled confined to institutional life was exposed in 1948 with a series of photographs taken by Irving Haberman at Letchworth Village in New York. This particular institution was highly regarded and had the reputation of a fine institution for the disabled until Haberman's photographs were published. The photos depicted "wretched conditions....Naked residents, unkempt and dirty, huddled in sterile day rooms" (Osgood, 2008, p. 91). The documentation of the mistreatment and abuse of the disabled in such institutions brought attention to practices within institutions for the disabled (Osgood).

Attitudes toward children with disabilities were slowly being eroded by the photographs of Haberman, as well as parents of children with disabilities (Osgood, 2008). In 1953, Dale Evans Rogers, wife of Roy Rogers, published a book about their Down's syndrome child entitled

Angel Unaware, in which the Rogers' spoke of the lessons of faith, patience, compassion, and love which they were learning through the parenting of their special daughter (Osgood).

1960-1980

During the 1960's and 1970's social change began to affect special education in the public schools. *Brown vs. the Board of Education* set the precedent for desegregation and the rights of minorities to be educated, leading to special education advocates labeling resource rooms as separate and unequal. The rights of minorities and students with special needs were in the spotlight (Osgood, 2008). Simultaneously, parents of learners with special needs rallied for the inclusion of their children into the neighborhood school. Educators came to understand the right of the disabled to a free appropriate public education (Winzer, 1998; Osgood). The 1954 judgment by Chief Justice Earl Warren noted in *Brown vs. Board of Education* when he wrote: "Separate educational facilities are inherently unequal. This inherent inequality stems from the stigma created by purposeful segregation which generates a feeling of inferiority that may affect their hearts and minds in a way unlikely ever to be undone" (as cited in Kennedy & Horn, 2004). *Brown vs. Board of Education* set precedence for the rights of African American students and impacted the inclusion of special learners in the years following the judgment by Chief Justice Earl Warren.

The work of Samuel Kirk in 1963 forever changed special education's approach to working with the disabled. He identified specific learning disabilities and categories which allowed special educators to recognize particular disabling conditions; resulting in a greater focus on serving students who may never have been identified previously (Osgood, 2008).

The Bilingual Education Act of 1968 resulted in the legislation and establishment of bilingual programs across the country (Porter, 1999). In the 1970's, the U. S. Supreme Court

determined that schools lacking provisions for educating language minority children were not providing equal education (Rothstein, 1998; Osgood, 2008). As a result of reform measures, the graduation rates of bilingual students from high school, and even college, rose in the ensuing years. The 1960's and 1970's reflected societal demands for both racial and gender equality as well as a focus on ethnic self-determination (Tyack & Cuban, 1995; Osgood). Federal involvement in the 1960' and 1970's forced a period of rapid growth in special education as schools were directed to provide services for students with disabilities (McLeskey & Landers, 2006).

This era marked federal support for special programs primarily as a result of John F. Kennedy's advocacy for his sister and other mentally retarded citizens. Kennedy's Panel on Mental Retardation brought attention to the rights and treatment of retarded individuals (Winzer, 1998; Osgood, 2008). President Kennedy, in October of 1963, passed Public Law 88-164 which added to earlier legislation for the handicapped. This new law more broadly defined special education to include the severely handicapped, the emotionally disturbed, and any health impaired children who required special education (Winzer, 1998; Winzer & Mazurek, 2000). Institutions for the mentally disabled continued to grow with many segments of society deeming institutionalization of the handicapped as an appropriate societal response (Osgood). However, this movement was followed by initiatives to dismantle institutions and move the disabled into half-way houses and community- based shelters in the 1970's (Osgood).

In the 1970's the Children's Defense Fund studied the census and found millions of children not in school. The Fund determined:

If a child is not white, or is white but not middle class, does not speak English, is poor, needs special help with seeing, hearing ,walking, reading, learning, adjusting, growing

up, is not smart enough or too smart, then, in many places, school officials decide school is not the place for that child. (Tyack, 2003, p. 99)

Osgood (2008) informs that the 88th Congress, the Education Congress, passed legislation supportive of vocational education, teaching handicapped children, medical education, community libraries, graduate programs, community colleges, and many other educational endeavors. Through the Equal Educational Opportunities Program of the Civil Rights Act 1964, the 88th Congress assisted schools and districts in providing opportunities through desegregation. The Economic Opportunity Act of 1964 provided assistance to students from low income families who wished to pursue a college education.

In 1965, the Elementary and Secondary Education Act brought in Title programs to assist schools with providing for the education of children from low income families. The government allocated tremendous funds expecting the schools to address the social problems of poverty, unemployment, crime, violence, urban issues, and racial discrimination.

Parent advocacy pursued litigation, brought legislation, and encouraged the public to focus on the rights of special learners. The Association for Children with Learning Disabilities lobbied strongly for the integration of special learners into public school mainstream classrooms (Winzer, 1998). Parents and advocacy groups during this era contended special classes were inadequate and inferior, testing of their children was inappropriate, and specialized class placement was harmful to their children's emotional development. Simultaneously, during this period in Great Britain, Baroness Mary Warnock sought to have students identified by their educational difficulties and provided instruction based upon their special educational needs (Cough & Corbett, 2000).

President Gerald Ford signed Public Law 94-142 in 1975 (Evans et al., 1995; Goessling, 2000; Osgood, 2008). This landmark legislation mandated the inclusion of even the most severely handicapped into the public school domain. Special education services came to the forefront as masses of disabled children entered the public school on the heels of P.L. 94-142. Students were placed in 'special day classes' during this era so the identified educable mentally retarded could be served (MacMillan, Semmel, & Gerber, 1995; Osgood). The service delivery model evolved into a resource specialist classroom model which still remains popular today as the inclusion of learners with special needs presents an alternate location where students may be sent to receive the regular school curriculum. Semmel, et al. (1995) support the notion that policy development has segregated students in the public schools as mirror reflection of the social context of the times and the creation of separate locations for service delivery lacks moral compunction.

There was much dissention among society and educators following the passage of P.L. 94-142 which brought special learners into the regular school (Osgood, 2008). A summation of this law published shortly after the law was enacted illustrates the opposition to the passage of this landmark legislation:

Initially, laws promising education for handicapped children appear as a human effort on the part of our government to embody in legislation the basic Constitutional guarantee of equal opportunity for all...At a practical level PL 94-142 jeopardizes realistic efforts at serving disabled children by legislating the impossible and by indiscriminately wasting fiscal resources. (Osgood, 2008, p.125)

Conversely, during this era there was also support for P.L. 94-142. In another report published several years after the enactment of P.L. 94-142, a supporter envisions the future of special education:

Does mainstreaming work? It clearly does...Change is never easy, but in our travels we have seen remarkable progress... Everywhere people are speaking a different language, becoming sensitive to the derogatory connotations of such words as “cripple” and “retard,” understanding disabled people endowed with human rights. (Osgood, 2008, p. 125)

Bateman (1995) stresses the troublesome relationship between special educators and general educators during this era. Special educators considered themselves better qualified to work with students with disabilities, yet general educators believed they could better serve those students in the regular classroom. He further suggested a service delivery model in which the special educator supported the general educator in the regular classroom; a model which has since evolved.

1980-2000

In 1983 *A Nation at Risk* galvanized the nation to focus on improving education for students (Winzer & Mazurek, 2000; Goessling, 2000). According to Schulte (2000), this report provided evidence of lower test scores of students as well as lower literacy rates in the United States. This report was a call to arms for the educational system to measure school achievement through testing and accountability. Across the nation, states began the process of developing and implementing accountability measures through state mandated testing. Students with special needs were impacted in 1984 through the Individuals with Disabilities Act requiring neighborhood schools and classrooms to open their doors to students with special needs.

2000-2010

The age of high stakes accountability was ushered in with the No Child Left Behind Act of 2001. This piece of legislation forever altered the face of the public school system as all students were to be measured yearly for progress and special education students were to constitute an accountability subgroup. Mandated was the requirement that students be educated in the least restrictive environment, and tested on grade level content at their assigned grade level (Yell, et al., 2006). Additionally, the Individuals with Disabilities Education Act of 2004 reauthorized the original IDEA of 1990. These two pieces of legislation provided the legal impetus for the inclusion of special education students into the general education class.

Education Today

We are still engaged in discussing and re-discussing the questions that were discussed and re-discussed by other teachers before we were born. The experience of the past indicates that these discussions and controversies may continue...to the end of time without settlement unless some new element can be introduced into the problem.

(Alexander Graham Bell, 1884, as cited in Winzer, 1998, p. 384)

Recent years have shed a spotlight on barriers to individual success, with researchers insisting that success hinges upon racial and economic foundations (Johnston, 1982; Laureau, 2003). Critics of the educational system insist that public education serves to socialize vast numbers of people into a system which maintains the status quo (Goodlad, 1984; Greene, 2008). Societal attitudes regarding the care, education, and role of the disabled in society have reflected the obligations which society has determined are appropriate at any given period in history (Winzer, 1998). Alexander Graham Bell's words resound yet today; persistent problems remain, and while some special education issues have been resolved, many still remain unsolved. Villa,

et al. (2004) remind educators that while change is complex and often overwhelming, the process must involve addressing the social constructs of a school culture.

“Education will not be improved by schools continuing to do the same things that have never worked and are still not working” (William Glasser, as cited in Villa & Thousand, 2005, p. 61). Glasser insists teachers must be more empowered to have a part in the creation and improvement of a school if we expect true change to occur. His theory emphasizes the human tendency to do what satisfies us, and he insists that teachers maintain a representation of an ideal world and return each day to create that ideal world. To address change, school systems must address teacher satisfaction with the work they do each day. Greene (2008) asserts that we cannot keep doing the same things we always have and continue to lose our learners. He asserts that educators must change the way they view students’ social, emotional, and behavioral challenges and teach them the skills they need in school, and for life in society.

Tyack (2003) urges society to consider the concept that perceptions of social differences persist when we select from various human traits and then sort people into categories based upon these traits. The legislation and reform measures which have granted equal access to minorities have also brought reform to special education (Yessel, et al. 2007; Padilla, 2005). Questions have revolved around two ideas: Are students the same or different? Should we change the standards for students? Our current thought seems to indicate the teaching of a standard curriculum and a uniform system for instruction. “What every child should know and be able to do” (Tyack). However, traditions of teacher practice reflect the internal decisions which teachers make about students and learning which ultimately affect student outcomes (Clough & Corbett, 2000). They suggest that decisions which teams of teachers make about how to reach and teach students is currently nested within the concept of including students with disabilities. Bill Daggett, a

member of the International Center for Leadership in Education, speaks to the systemic reform aspects of the school improvement process:

One of the most important lessons we have learned is that effective and sustained school improvement begins with creating a shared vision toward change that is based on rigor, relevance, and relationships for all students. Once the need for change is embraced by the entire school community, then a consensus must be built among all stakeholders on what needs to change and how the process of reform will take place. The reform process must include measurable goals and actions. (Daggett, 2008)

Daggett informs educators that systemic change must include a shared vision for the education of all students. The notion of teaching all students, regardless of ability or disability, is supported by Daggett (2008) when questioned about to whom ‘all’ refers: “All means ALL”.

A Medical Model

A hundred years from now, when historians interpret the present, the fundamental debate will be whether social cultural, political, and economic factors provided force enough for normalization and mainstreaming to become appropriate realities for all persons with disabilities. (Winzer, 1998, p. 385)

Current ideological views of inclusion are based upon the medical model, whereby disability results from identified physical, sensory or neurological impairment stemming from damage or disease (Runswick-Cole, 2008; Clough & Corbett, 2000). This medical model presumes deficiency and limited capacity of individuals with disabilities, and seeks to ‘correct and remediate’ a deficient individual. Clough and Corbett illustrate the focus of the medical model upon sickness, pathology and treatment as opposed to health, environment, individual

experiences, and preventive measures. Valle and Conner (2011) contend the medical model functions as the primary source of diagnosis and treatment of students with disabilities.

The medical model can pose a problem whereby school personnel focus on the child's physical or medical condition instead of finding appropriate strategies for working with a student's disability (Evans, Labon, & Meijer, 1995; Zionts, 2005). This perspective of finding fault and assigning blame within the child are issues which must be addressed according to Zionts. Runswick-Cole (2008) favors a social model of disability which nests disability within economic and social structures and seeks to eradicate cultural forms of exclusion for individuals with disabilities. This social model calls for a society's collective responsibility in supporting individuals with disabilities both in our schools and within society at large.

The use of a medical model in diagnosing and working with students with disabilities provided the lens through which learning problems, behavioral issues, and socialization of children have analyzed throughout history (Runswick-Cole, 2008). The medical model has allowed the school and society to blame the child for an inherent failure to succeed, and thus rationalized the segregated learning institutions for learner with special needs (Gelzheiser, as cited in Wizner, 1998 p. 6; Terzi, 2008).

Equity and Inclusion

Charles Darwin, in his *Origin of Species* (1859) alludes to the beauty and individuality of life:

There is a grandeur in this view of life with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, while this planet has gone circling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being evolved. (p. 356)

Critical theorists in the field of education would quickly point out the issues of equity, and its lack thereof, in our educational systems today. Scott (2001) presents the pillars of institutions which contribute to sustainability of the outdated systems of thinking. The normative pillar supplies norms and values which are essentially assigned to individuals depending upon their social position. Such assignments tend to place restraints upon all individuals within the system; from how we view others, to how we view ourselves. The cultural cognitive pillar defines the lens through which we interpret our lives and apply meaning. Cultural cognitive theorists subscribe to the belief that human behavior is a result of a cultural imprinting which prevents most people from thinking beyond the accepted norms of society. Valle and Conner (2011) assert that disability is a result of social, political, economic, and cultural practices which define and restrict individuals within society.

Cultural Deficit Theory

Malloy (1994) insists that school district policies and culture influence curriculum, which in turn, determine the extent to which certain groups of students will ultimately be successful in society, while Valenzuela (2005) presents a more current critique of the cultural limitations for minority students. Critics of state mandated testing measures such as Valenzuela are radically opposed to standardized testing and present testing data for minority subgroups which indicate lower test scores than their white peers. Padilla (2005) asserts that the issues facing Latinos in school are a result of a cultural deficit paradigm in which any child who is not Anglo American is culturally deficient. Issues facing minority subgroups as regards lower standardized test scores are now an issue for special education students and teachers as a result of the mandates of No Child Left Behind (Yell, et al., 2006). Special populations have historically been either exempted from testing or administered a lower level test. No Child Left Behind mandated access to grade

level content standards and further mandated the percentages of students which could be administered a modified or alternate test (TEA, 2010). These mandates have caused school districts and school administrators to scramble in an effort to meet the requirements of the law for special education students and to avoid the consequences of student failure (Jones, 2009).

The impact which cultural deficit theory has upon the achievement of culturally divergent students has been noted by theorists in the field of bilingual education. Valdes and Figueroa (1994) studied the area of test bias and its impact upon bilingual students. They found bilingual students were often punished in schools as a result of standardized tests biased toward the monolingual student. They suggested the testing results of bilingual students were lower as a result of language processing rather than cognitive processing issues.

In an effort to provide equity for special education students, (Malloy 1994) suggested the replacement of prescriptive learning experiences, and today's educational research springboards from the work of researchers such as Malloy and Hiebowitsh with their focus on high access instruction and differentiation of learning (Gale Group, 2004; Tomlinson, 2003; Villa, et al., 2004; Sailor & Roger, 2005). Hiebowitsh (as cited in Malloy, 1994) vehemently insists special education is a place in which students are categorized and sorted in an effort to oppress minorities and students of low socioeconomic status. Olsen (as cited in Malloy, 1994) further underscores the effects of categorization of students and their inability to take advantage of opportunities in a society in which they have historically been oppressed.

Lipsky and Gartner (1994) and Murtadha-Watts and Stoughton (2004) reinforce equity issues found in special education placements through the use of segregated learning systems. They support the notion that students in special education are not only separated from the general population, but fall victim to lower expectations from within the system and produce a less

capable learner (Gale Group, 2004). Gay (2002) notes low teacher expectations accompany students who differ from the normative expectations of the educational system. The responsibility then falls upon the school systems to provide educational opportunities for learners with special needs as well as develop students to their fullest capacity. In his landmark work in multiple intelligences, Howard Gardner viewed intelligence as multiple areas in which humans may be developed. According to Gardner (1983), human intelligence may be considered a genetically programmed system which may be triggered by particular experiences. Intelligence rarely develops in isolation, so the ability to train individuals and develop their capacities- and intelligences- becomes vital. Gardner's work in the early eighties has continued yet today through many educators such as Fitzell (2007) and Villa and Thousand (2004) who stress the importance of developing lessons which utilize multiple intelligences to assist students in mastery of content.

Critical cultural theorists (Murtadha-Watts & Stoughton, 2004; Terzi, 2008; Clough & Corbett, 2000) draw attention to the inequitable power relations of society at large which are absorbed by teachers and administrators in the school systems, who unwittingly deny students with diverse needs the opportunities which may be granted to students of the dominant culture; in this case, students without disabilities.

Inclusive Design

In 1995, the National Education Association (as cited in Hallahan & Kauffman, 1995) supported and encouraged appropriate inclusion, and such pillars assist in defining inclusive education supported by Villa, et al. (2004) today:

1. A full continuum of placement options and services for students with disabilities.
2. Professional development geared toward the needs of students being served.

3. Professional time to collaborate and plan for student instruction.
4. Class sizes appropriate to student need.
5. Staff support appropriate to student and teacher need.

Systemic Change

Goodlad's research in 1984 indicated that teachers worked very autonomously of one another and of the school system itself. His study, conducted almost thirty years ago, found very little collaboration among teachers and little district level determination of goals for all schools and teachers still rings true today. The necessity of planning collaboratively has become an effective strategy utilized by school administrators today (DuFour, et al., 2006). Winzer and Mazurek (2000) inform educators that the provision of inclusive classrooms means that teaching must change. According to Dieker and Murawski (2003) special education teachers often indicated that they felt less prepared to work with special students as they progressed higher through the educational system.

Teachers today express a fear of working with special students in high school subjects such as mathematics and science where the teacher feels academically inadequate (Dieker & Murawski, 2003). It would seem that any long term systemic changes within the educational organization will ultimately result from outside of the organization through social and instructional scaffolds (Winzer & Mazurek, 2000). Johnston (2006) attributes educators' inability to change the system to economic and academic 'stratification' which is determined and controlled by forces outside of the organization. Such forces ensure that power, control, and money remain with the privileged few. Villa and Thousand (1995) and DuFour, DuFour, and Eaker (2008) outline the importance of organizational change through the development of a

school vision, consensus building, teacher preparation, and organizational structures and policies supportive of every learner in our schools.

Schools

Schlechty (2001) reminds educators that systemic reform changes social structures and the culture in which these structures are embedded. It changes systems, not people. In changing systems within the organization, it shapes behavior within the organization. Projects and programs that depart dramatically from tradition cannot be implemented successfully until the systems in which they are embedded are changed to support them. Marzano (2003) insists systemic change at the teacher level and school level are directly linked to leadership within the system. A guiding coalition (continuity of leadership) is essential to the success of systemic change.

Schlechty (2001) advises schools and teachers on the business of school improvement and provides the foundation for changing our schools today:

- 🌐 The business of schools is to provide tasks, activities that the students find engaging and which encourage them to interact with content and processes which they will master to become well educated.
- 🌐 The learning of skills, and the creation of a world class workforce, the development of a democratic citizenry, the ability to think and reason are results of schools doing their business well. This is the purpose of education; the end result.
- 🌐 The proper focus of schools is the quality of work provided students and the capacity of that work to engage students, allow students to be persistent, and produce a sense of accomplishment.

Schools must focus on what students are expected to do in order to learn whatever it is expected for them to learn. They must focus on how students can be brought to do those things which will result in learning what is intended. Educational leaders must focus on those things that result in learning. What schools are about is designing work for students that students will do and from which students learn what is intended that they learn (Schlechy, 2001).

- 🌐 Curriculum must be aligned and be deep and meaningful to students.
- 🌐 Students must be highly engaged in learning activities. Engagement is active, and leads students to do more than the expected minimum.
- 🌐 Students must be persistent in their tasks even when they fail.
- 🌐 Student satisfaction: students feel a sense of accomplishment with their work.

Research indicates numerous practices which foster inclusive education through the incorporation of outcome based education, interdisciplinary studies, constructivist learning, multi-age groups, peer coaching, and collaborative teaming of teachers (Udvari-Solner & Thousand, 1995; Shinsky, 1996; Villa, et al., 2004; Villa, et al., 2005). The incorporation of such practices into the general education setting support educators in facilitating effective inclusive instruction for diverse populations of students. Bateman (1995) cites the more effective instructional practices which can be found in the general education setting as support for the inclusion of learners with special needs while King (2003) instructs schools that effective practices must be learner centered.

Teachers

Dukes and Dukes (2009) are clear in their advice to teachers regarding changes necessary to support inclusive environments. They advise that general education teachers must expand beyond a narrow focus on curriculum content while special education teachers must learn to

move beyond individual needs of their students. In other words, a melding of the expertise of both general education and special education teachers must occur; general education teachers will need to become more aware of teaching students with learning difficulties and special education teachers will need to become more adept at teaching the curricular content. “Inclusive education involves a commitment to every child, and every child requires different supports for learning” (Villa & Thousand, 1995, p. 139).

School administrators must focus on providing the professional development that will bring about the desired change. Sorenson and Goldsmith (2009) remind administrators that the most effective route to change is to work with teachers in order to gain their support and to facilitate positive attitudes toward change. Fattig and Taylor (2008) note the importance of the school administrator in supporting teachers throughout the change process and allowing for innovative teaching approaches.

Culturally Responsive Instruction

The research of Murtadha-Watts and Stoughton (2004) and Valenzuela (2005) allude to a theory of cultural disparity for diverse learners in our school systems today. Special learners who arrive in our classrooms with diverse backgrounds and diverse learning styles require culturally responsive teachers. Montgomery (2001) develops the concept of providing a culturally responsive inclusive classroom in which teachers ‘recognize the differing learning styles of their students and develop instructional approaches which will accommodate these learners’ (p. 4). Montgomery further suggests the following instructional considerations for culturally diverse inclusive settings:

- Culturally sensitive lesson plans and materials.

- Strategic instruction which supports students.
- Interdisciplinary units of instruction which will accommodate diverse needs.
- Scaffolding of student learning throughout the process.
- Use of project based assignments and journal writing.
- Classroom environment and attitudes accepting and celebrating diversity.

Differentiated Instruction

Tomlinson (as cited in Cox, 2008, p. 83) sets parameters for differentiation of the curriculum: “Differentiated instruction is teaching with student variance in mind. It means starting where the students are, rather than adopting a standardized approach to teaching that seems to presume all learners of a given age or grade are essentially alike.”

Addressing differing needs within the classroom will demand a change in mindset for teachers who believe the problems they are experiencing in teaching stem from inherent problems in students, to a more accepting mindset which suggests that the problems they may be experiencing in teaching stem from classroom practices and the impact they have upon the individual student (Broderick, et al., 2007; Osgood, 2008). They support the use of differentiated instruction to support the differing needs of many through relevant, flexible, and engaging lessons (Udvari-Solner & Kluth, 2008) addressing the natural diversity in our schools today. Cox (2008) informs of the necessity of differentiating instruction for the vast diversity found in schools today. One definition of differentiation involves changing the pace, level, or type of instruction provided in response to student need, learning style, or student interest (Shinsky,

1996; Heacox, 2002). The development of differentiated lessons is best addressed through collaborative efforts on the part of all staff involved in the inclusive classroom.

Tomlinson (1999) and Tomlinson (2003) support the development of the instructionally responsive classroom through differentiated instruction. In such a classroom, the teacher responds to the varying needs of all students by developing lessons and activities which scaffold student learning through differing instructional strategies and classroom models. She suggests teacher planning which defines the skills students must know by the end of a lesson and the creation of numerous engaging activities which provide an array of opportunities for students to demonstrate knowledge. In addition, Tomlinson stresses the importance of focusing upon student strengths and interests when developing lessons. Heacox (2002) and Shinsky (1996) underscore the importance of using student interests, multiple intelligences, project based activities, tiered assignments, use of grading rubrics, and parental involvement in the successful differentiated classroom. Engel and Randall (2009) cite recent work in developing lessons of interest to students, noting greater achievement linked to greater interest. Gordon and Crabtree (2006) underscore the importance of teachers asking themselves what students do well, and then structuring their teaching so students can learn. Heacox provides advice to teachers on the differentiation of instruction using the state standards: “The most effective way to help students meet standards is by differentiating your instruction” (p. 53).

Broderick, et al. (2007) and Fitzell (2007) outline in great detail the methodology involved in differentiation of the curriculum. The knowledge and skills which students are required to master fall in the domain of content. The scaffolding of instruction from the student’s current level to the level stipulated for mastery allows a teacher focus on how to provide instruction at the level of understanding for each student. The process of providing this

instruction is where differentiation of activities occurs and where the teacher may accommodate or modify instruction specific to the learning needs of the student. As the teacher develops multiple activities for demonstration of mastery, the student then has a variety of options when producing a product which shows mastery of the grade level expectation through clear criteria. Karten (2008) informs educators that students with disabilities must be given instruction which allows them to apply, generalize, and retain concepts through individualized skills development.

Udvari-Solner, et al. (2005) articulate a process for teachers to consider when designing lessons for learners with special needs in the general education setting which include careful consideration of the following elements: 1) can the student participate in the lesson without modifications 2) will a change in the instructional arrangement increase student participation 3) will a change in the delivery of instruction impact student participation 4) should changes be made to the classroom environment or location 5) will different instructional materials facilitate learning, and 5) should an alternative activity be provided for students.

Cooperative Learning

Fister (1996); Dieker and Murawski (2003); and Mastropieri, Scruggs, and Berkeley (2007) illustrate the impact of cooperative learning strategies with students with learning differences in the general education setting. Cooperative learning is a strategy which utilizes peer instruction whereby students work together in the achievement of both academic and social goals through the use of heterogeneous learning groups which develop a team approach to learning with a component of individual accountability to the group and the learning process. Numerous benefits of cooperative learning include increased achievement and retention, increased

motivation, improved social skills and attitudes toward learning, and less disruptions throughout the learning process.

Collaboration

Parallel play, a wonderful concept from the preschool literature, is thought to be a primitive stage of human development through which 2 and 3 year olds soon pass through on their way to more sophisticated forms of interaction. To illustrate, imagine two 3 year olds busily engaged in opposite corners of the sandbox. Although in close proximity for a long period of time, each is so self-absorbed, so totally engrossed in what he or she is doing, that the two of them will go on for hours working in isolation...

Parallel play offers, of course, a perfect description of how teachers interact at many elementary, middle, and high schools. (Barth, 2006, as cited in DuFour, DuFour, & Eaker, 2008, p. 177).

Meeting a variety of student needs in the general education setting requires finely tuned collaboration between educators. DuFour, et al. (2006), and DuFour, et al. (2008) remind educators they cannot accomplish high standards and instructional goals unless they work together collaboratively. Collaboration in the inclusive classroom takes many forms. Much planning and collaborative effort occurs in a school planning for inclusive environments on the campus. In the classroom, collaboration may take the form of general education teachers, special education teachers, and paraprofessionals working together to provide instruction inside the classroom as opposed to outside of the general education class (Hammeken, 1996; Broderick, et al., 2007; Mitchell, 2008; Raynor, 2007). Collaboration is highly effective when teachers focus on issues directly related to teaching and learning (DuFour, et al., 2006). Guerin and Male (2006)

and Kennedy and Horn (2004) discuss the importance of the collaboration of the special education teacher with the general education teacher in the planning and delivery of instruction for special learners.

Components of collaboration are highlighted by Kennedy and Horn (2004) and Villa, et al. (2005). Supporting students with disabilities requires teaching professionals to participate in program development, respect instructional diversity, share responsibility for learners with special needs, communicate successfully, and redefine professional roles in working with special learners. Cross and Villa (2005) note teachers must not ask of students what they cannot themselves model. Teachers must support and respect one another through collaborative planning and teaching teams which demonstrate for students a caring and inclusive attitude. Fattig and Taylor (2008) highlight the importance of communication in developing a foundation of trust in collaborative relationships between teachers. Villa, et al. (2004) further support the collaborative process through shared values, goals, and belief systems which support the inclusion of special learners. They stress the value of reflective practice in examining the effectiveness of their collaborative efforts throughout the instructional process.

Walther-Thomas, Korincek, and McLaughlin (2005) note collaboration is a nebulous concept which finds a group of individuals who care deeply about the same issues but who come to the table with different perspectives. They refine the purpose of collaboration as being a supportive effort which improves student learning. They rally for collaborative networks of support from agencies, teachers, service personnel, and school personnel to improve learning experiences and outcomes for students with learning differences.

Collaborative efforts between general education teachers and special education teachers may result in co-teaching methods being used instructionally (Villa, et al., 2005). Laframboise,

Epanchin, Colucci, and Hocutt (2004) define co-teaching as a service delivery model in which special education teachers and general education teachers plan and deliver lessons together as a team. Guerin and Male (2006) define co-teaching as a collaborative model in which the classroom teacher and the special education teacher provide instruction together. Friend and Bursuck (1996) and Dieker and Murawski (2003) instruct teachers that the inclusion of students with special needs provides an opportunity for them to differentiate and modify instruction to meet the multiple learning styles within the classroom through collaboration with their colleagues in the planning process.

Co-Teaching

Co-teaching models of instruction may be witnessed through several venues; one venue may find two teachers working side by side in the teaching of the lesson, another venue may find the special education teacher modeling instruction with a small mixed group of students, still another model allows the special education teacher to develop activities and modify materials for use by the general education teacher (Guerin & Male, 2006; Valle & Conner, 2011). Villa, et al. (2004) insist co-teaching provides greater opportunities for teachers to address the needs of students through a greater range of teacher knowledge, skills, and instructional approaches. Villa, et al. (2004) found greater student interest and student participation, as well as increased student gains through the use of a co-teach model. They cite numerous benefits of co-teaching including better student attitude, greater instructional conditions, increased use of research based practices, greater sense of community among students, as well as increased teacher job satisfaction. They insist that co-teaching is the ‘vehicle’ through which schools, students and teachers feel less isolated and experience a sense of community and collaboration (p. xv).

An empirical study conducted by Laframboise, et al. (2004) provides insight into the characteristics of effective inclusive teachers. Effective inclusive teachers are well organized and ensure attention to time on task, they plan thematic lessons that can be modified to meet individual needs, and finally, they differentiate and incorporate whole group, small group, peer tutoring, and individual lesson components. Mitchell (2008) and Sacks (2009) support the use of cooperative learning groups and peer tutors as strategies for supporting special learners in the general education classroom. The use of age group peer tutors and cross age peer tutors is further supported by Guerin and Male (2006) and Karten (2008). Peer tutors are trained to assist with the activity through cues and prompting of their peer (Hardin & Hardin, 2002; Villa, et al., 2005; Mastropieri, et al., 2007). Masatropieri et al. determined through their quantitative study with fourth graders that effective peer tutoring strategies result in greater achievement for learners with special needs in the general education setting. Diller (2007) remained focused on ‘kids and curriculum’ (p. 3) as she developed lessons based upon state standards, student assessment, and which allow for flexibility in student learning styles and ability levels.

The instruction of parents in working with their children at home can be developed through videotaping, role-play, and small parent groups (Mitchell, 2008). The power of parents to impact their children’s education can support the structures used in the school. Childre (as cited in Kennedy & Horn, 2004) emphasizes the importance of learner-centered planning when involving parents in the instructional goal setting and outcomes for their children in the inclusive setting. Collaboration with families is noted as vital in enhancing the social, emotional, and academic outcomes for students when the family is included in all aspects of their child’s education (Brady, 2005; Sacks, 2009).

The early identification of a student's special needs along with learning strengths and weaknesses, provide the foundation for planning instruction appropriate to the student's needs. This early identification of learning difficulties allows for early response to intervention and exposes the student to less failure and more success (Guerin & Male, 2006).

Response to Intervention

Effective culturally responsive implementation of multi-tiered instruction and RtI, using a problem-solving model..., provides a solid foundation for providing diverse learners with relevant education while simultaneously avoiding the misinterpretation of learning differences as learning or behavior disabilities .(Hoover, 2009, p. 35)

Traditionally, schools have utilized special education as the place to send students who were not achieving by the same norms as their peers (Bateman, 1995: Karten, 2008). As early as 1979, Ainscow and Tweedle recommended identifying struggling learners and providing interventions immediately in order to prevent a child's exposure to failure. The process of identifying struggling learners has evolved over the past thirty years, and today, schools are implementing a 'Response to Intervention' model (RtI) which assesses, monitors, and provides interventions to all learners as they progress. Mellard and Johnson (2008) define RtI as an intervention piece which occurs in the general education setting specifically for the prevention and intervention for any student experiencing learning difficulties. Cartledge and Kourea (2008) indicate that early intervention models can minimize, or mitigate entirely, the identification of disabilities in young students. The use of high quality instruction in the general education classroom with identified and documented sets of interventions serve to provide several outcomes simultaneously: RtI addresses student learning difficulties and provides interventions

in a timely and consistent manner, RtI is based upon monitoring, assessment, and intervention of student learning with each component highly documented, and finally, when students fail to progress, the documentation of RtI provides added support to referrals for special education. While RtI does not formulate systemic changes, change is inherent within the three-tiered intervention model. Response to intervention generally reduces the referrals to special education by sixty percent when monitoring, assessment, and interventions support students in determining how best we can teach concepts to each individual student (Marston, 2005).

A response to intervention model utilized in schools generally takes a three-tiered approach; Tier I is comprised of high quality instruction for all students in the general education setting, Tier II serves a smaller set of students who need further instruction, monitoring, and intervention specific to learning difficulty, and Tier III is reserved for special education services provided to students who qualify based upon assessed need for specially designed instruction targeted to identified disability (Mellard & Johnson, 2008). Fuchs and Fuchs (2007) note RtI falls within the general education realm, and insist that special education be an integral part of the RtI process.

The success of RtI is linked to the early identification and instructional intervention for struggling learners. Through RtI, teachers examine the quality of their instructional practices as linked to student mastery and make informed decisions based upon student performance data. This multi-tiered service delivery model addresses the improvement of instruction for all learners in the general education setting while increasing student success through appropriate instructional interventions. In essence, RtI assumes the position that all students can learn through appropriate instruction and intervention, and through this assumption, allows more students to be served in the general education classroom (Mellard & Johnson, 2008).

Hoover (2009) reminds us that culturally responsive education must take place within each tier of RtI to prevent the misinterpretation of learning differences and learning disabilities:

Culturally valid response to intervention can only occur if tiered instruction is implemented in culturally responsive ways, and this may only occur if educators incorporate the diverse needs and strengths found within and resulting from the student, school, and home/community factors comprising an ecological framework. (p. 110)

The Process of Learning

The gap between the rhetoric of individual flexibility, originality, and creativity in our educational goals and the cultivation of these in our schools reveals a great hypocrisy. From the beginning, students experience school and classroom environments that condition them to seek right answers, conform, and reproduce the known. (Goodlad, 1984, p. 241)

Differences in measured ability and family background and culture are beyond the control of school personnel (Schlechty, 2001). However, teachers and schools do control the quality and type of tasks they provide for all students. Different people respond to the same processes differently, and part of how they respond is due to cultural influences, personal experiences, in addition to considerations of ability and disability. Hoover and Patton (2005) note the cultural deficits which are attributed to special needs language learners and the necessity of culturally responsive curriculum. Bazron, Osher, and Fleischman (2005) argue for a culturally responsive environment which encourages self-concept, reduces discipline problems, and improves academic outcomes for ethnic minorities; many of whom have been identified with special needs.

A constructivist approach to teaching and learning supports culturally and linguistically diverse student groups (Villegas, 2007). Through constructivism, every student uses their prior knowledge and values to comprehend new skills. Including student experiences in the learning activity increases engagement and provides the bridge between prior knowledge and future learning (Villegas).

The question for educators, then, is this: What do we need to do in order to create a supportive student culture for every one of our students? Pouring more money into the schools will not resolve the problem if we continue to utilize the same processes that have proven ineffective in the past fifty years. We must control the processes which affect quality outcomes. If we are controlling the process of learning, then students will exhibit the following (Schlechty, 2001):

- ☞ Active engagement; students want to do their work.
- ☞ Persistence with tasks which may be difficult or tedious.
- ☞ Student satisfaction with their work; and a sense of pride and accomplishment.
- ☞ Students exhibit mastery of what it is that we expect them to learn.

Great teachers understand these concepts and work to ensure that the work they give students is work which the students will find engaging. The work of teachers is to be found in inventing work-specifically knowledge work-that has attributes that appeal to the motives of students...great teachers understand that students are motivated, and they design schoolwork in a way that appeals to those motivations (Schlechty, 2001, p. 83). When teachers design the work right and when they provide the right work (work that contains the right content), students do learn (Schlechty, p. 83).

The reason students do not learn is the quality of work which the teachers and schools provide to the student....good teaching must be learner centered. The quality of teaching is defined by the student; if a student is learning, then quality teaching occurred. Teachers must know their students very well in order to design lessons which the students will find engaging. The quality of a students learning is a direct result of the quality of the lesson provided by the teacher. A master teacher designs lessons which he/she knows will engage students to learn and maintains high academic achievement standards with clear goals for students with disabilities (Friend & Bursuck, 1996; Jones, 2009; Tomlinson, 1999).

Universal Design

Planning and instructing lessons which address the great diversity in language, culture, interests, skill levels, abilities and needs of all students is a challenge which teachers and campuses deliberately employ (Dieker & Murawski, 2003). Strategies to support the universal success of every student contribute to the development of a school-wide philosophy which enhances and supports the learning and development of diverse learners (Guerin & Male, 2006; Zions & Baker, 2005; Valle & Conner, 2011). Guerin and Male (2006) further stipulate several practices evident in schools which support diverse learners; the culture of the school celebrates diversity, students are provided varied opportunities to demonstrate knowledge, individual differences in students are accepted, varied instructional strategies to meet diverse learning modes are employed, and all students in the school are encouraged to achieve and succeed.

The design of lessons which engage students of all abilities and disabilities is a concept which Dukes and Dukes (2009) insist must first begin with inclusive design. They suggest that a successful inclusion program must begin in the design stages wherein the school staff identify the need and the purpose, develop the framework around the need and purpose, and then proceed

to build the program while continually evaluating and making needed changes to the system.

Essentially, a school must carefully plan every stage of providing an inclusive environment for their students, continually evaluating and making changes as needed to the inclusive design.

Once the framework is firmly in place, then the school may begin to focus closely upon instruction. Schlechty (2001) points out the foundation for the instruction of diverse learners in his standards of good teaching:

- 📖 Lessons are learner centered.
- 📖 Lessons and activities are engaging to the student.
- 📖 Quality of the lesson is defined by the student and their understanding of the lesson.
- 📖 Work assigned must have value and meaning to the student.
- 📖 Students must understand the reason they do this work (communicate standards).
- 📖 Students must feel that they have a chance at meeting the standards.
- 📖 Students feel safe to fail and continue to try (persistence).
- 📖 Students have choice in the ways they can accomplish their work.
- 📖 Teachers provide a wide range of opportunities for success.
- 📖 Teachers design activities in which all students are held to common standards.

Through teacher care and planning, schoolwork can be designed so that all students are engaged in an activity which is customized so that each student has choice and control over their learning; some students may do work to demonstrate mastery, others may be learning new concepts, while

still others may be experiencing the social interactions inherent in the activity (Schlechty, 2001, p. 193).

Access to engaging curriculum for diverse learners may be approached through a universal design method. Karten (2008) informs that universal design focuses on attending to the most valuable standards in the curriculum and designing instruction for all learners around those power standards. He stipulates that universally designed classrooms provide tools and strategies for varying types of learners to access and master the curriculum. Power point presentations, Braille notations in elevators, and curb cuts on sidewalks are all examples of structures which provide universal access for individuals with diverse needs through a universal design concept.

Leadership

The formation of inclusive schools is further supported by Mayrowetz and Weinstein (1999) with the leadership functions suggested for change; providing a vision, recognition of accomplishments, availability of resources, standard procedures, and monitoring and adjusting throughout the process. Effective leadership requires a focus upon those critical questions which will result in student learning and achievement (DuFour, et al., 2006).

Societal Views on Inclusion: Who Should be Included and Who Should Not?

If we regard inclusion as a religious principle, if we disregard the differences among the students we consider disabled, if we continue to insist that the least restrictive environment is some absolute standard rather than a continuum of variability that has truth only for each individual in question, then we will lose some of the most valuable and creative and lovable citizens in our community. (Diamond, 1995)

Diamond (1995) sheds light upon culturally defined disability while reminding society of their duty in respecting individual difference while creating provision for a continuum of

services which meets the needs of every individual with a disability. The social and cultural contexts by which we categorize students provide the foundation for such decision making.

An examination of the current cultural, social, and political contexts within which we educate children would provide insight into the foundations of our educational system. Johnston (1982) advises that we must address those critical issues within a social reality when implementing change in our schools. Murtadha-Watts and Stoughton (2004) claim culturally diverse children and special education students are often neglected due to the cultural and social mindsets of our educational leaders. They conclude there is often an over-representation of cultural minorities in special education also linked to our beliefs as a society. It has been noted that more than seventy-five percent of students receiving special services have been misdiagnosed (Reynolds, Wang, & Walberg, 1987) and that blacks are twice as likely to be identified for special education as whites (Lipsky & Gartner, 1994).

Fuchs and Fuchs (as quoted from Malloy, 1994) are critical of the current ideology of education; namely that educational institutions are divided into 'conservationists and abolitionists'. Conservationists believe that the best services can only be provided in a segregated setting while abolitionists seek to provide all services within the general education classroom. More currently, Winzer and Mazurek (2000) lend credence to both camps of thought as perspectives of both sides seek to influence the future of special education. Nathanson (1997) notes that the resources poured into the education of those with special needs drain the educational resources of non-disabled children disproportionately impacting the dominant culture.

Foucault (as cited in Malloy, 1994), and more currently Valenzuela (2005) in her work with minority students, each emphasize the eventual harm which results from an educational

system designed to serve a dominant culture. Students from the dominant culture are able to navigate the curriculum, learn the necessary skills, and become productive members of society. Conversely, students not of the dominant culture face an institution which strives to change, remediate, and improve them.

Semmel, et al. (1995) and Heward (2003) note the ineffectiveness of a classroom serving a wide range of diverse learners through the use of standardized learning objectives. Even with the influx of resources and support services, they note teachers do not teach children as well as they are capable of, diminishing resources for general education, and an overall negative impact upon the entire classroom:

It is likely that a regular classroom using individualized instruction can accommodate a wide range of student abilities, so that the interaction between IQ level and setting seen (in some studies) may be specific to situations in which no special accommodations are made for very low achieving students in the regular classroom. (Madden & Slavin, 1983, p. 560, as cited in Semmel et al., 1995, p. 51)

Slee (2001) scathingly contends disablement is a cultural manifestation resulting from inequality of social relations. He contends the true outcome for learners with special needs is that they find themselves at the outer margins of the classroom and school. Lipsky and Gartner (1994) and Osgood (2008) allude to the social implications of restructuring schools for inclusion by suggesting that children are handicapped by a disabled societal environment which frames disability as a social construct. Based upon these assumptions, they conclude changes must be instituted from within society itself and that we must examine the 'kind of society we desire and the nature and functions of schooling' (Lipsky & Gartner, p.1). According to Karten (2008)

medical, social, political, and cultural influences can complicate perceptions and attitudes toward students with handicapping conditions.

Terzi (2008) supports the notion that social justice is the foundation for educational equality. Social justice supporting such educational equality does so through a liberal egalitarian theory of justice. Liberal egalitarians maintain the development of social and institutional structures based upon equality and respect for all individuals in society. Such a philosophy lends itself to the development of educational programs which provide equity and access to special learners (Winzer & Mazurek, 2000; Osgood, 2008). An egalitarian view is best endorsed in the following statement made by UNESCO in the Salamanca Treaty in 1994:

Every child has a fundamental right to education, and must be given the opportunity to achieve and maintain an acceptable level of learning...those with special needs must have access to regular schools which should accommodate them within a child centered pedagogy capable of meeting these needs. (As cited in Terzi, 2008, p. 21)

Egalitarians rally to remove barriers to societal participation for the disabled. This philosophy is deeply rooted in an equal concern for all members of society reflected in the social and institutional arrangements designed around this fundamental human concern. The conflict between the philosophy of the social model and disability nested in social constructs and the medical model which defines disability and places it as a burden upon the student continues to impact legislation and program development for the disabled (Terzi, 2008). Egalitarian theory is concerned with those in society who are socially defined as advantaged or disadvantaged, whether those advantages or disadvantages are a result of social or natural roots, and the idea that disability is a deficit which leads to inequity for those with disabilities.

Lareau (2003), through her studies in race and class differentials of parenting styles compels educators to provide equal educational opportunities to all children who may be experiencing unequal educational benefits due to parenting patterns attributed to race and class. The sociolinguistic styles utilized by diverse cultures of parents are areas which schools must address through inclusive education of all of our students. Villegas (2007) contends socio cultural consciousness is fundamental to recognizing and honoring diversity. She notes that schools perpetuate the unequal power relations recognized by the work of Lareau. While current programs reflect a move toward honoring diversity, there is still much work to be done.

Including students with special needs has proven to be a difficult and demanding process throughout the years (Winzer & Mazurek, 2000). While many school personnel fundamentally believe in the right of special learners to be educated beside their non-disabled peers, the actual practice of inclusion does not always mirror the ideology (Winzer & Mazurek). Fullan (as cited in Villa & Thousand, 2005) states: “The neglect of the phenomenology of change-that is, how people actually experience change as distinct from how it might have been intended-is at the heart of the spectacular lack of success of most social reforms” (p. 130). Fullan clearly expresses the issues which are at the heart of creating and sustaining systemic change for diverse learners.

Past to Present

Currently we serve students with special needs through a medical model (Murtadha-Watts & Stoughton, 2004). Teachers and other school personnel assume another agent is responsible for providing services to the students in their class. They believe only the special education teacher has the knowledge and skills to work with the special needs student, so the student is sent away to another location for this service. Skritic (as cited in Malloy, 1994; Terzi, 2008) is convinced that students whose needs are not within the range of expectations of the

general education teacher are referred to teachers with the expertise to work with the student.

This leads to an unequal balance of power in which parents and general education teachers have little power; for the power rests with those who have the knowledge, the specialists.

Lipsky and Gartner (1994) report dire outcomes for special education student upon leaving high school. Special education students are:

1. Less likely to continue their schooling.
2. Less likely to have a job.
3. More likely to work part time.
4. More likely to be paid less, more likely to have lower status jobs.
5. Less likely to live independently.
6. More likely to end up in prison.

Accountability to Diverse Populations

School districts today are facing great challenges regarding the education of diverse populations of children as past years have witnessed vast changes in the education of students with special needs (Winzer & Mazurek, 2000). Recent years have witnessed a decline in the public belief in the school's ability to educate all children. Researchers in the field of education provide discourse which informs that the barriers to individual success hinge upon racial and economic foundations (Winzer & Mazurek; Osgood, 2008; Winzer, 1998). Critics of the educational system insist that public education serves to socialize vast numbers of people into a system which maintains the status quo (Goodlad, 1984). The task of socializing students with a wide range of needs while meeting national and state standards simultaneously has proven to be an onerous task. This task requires changes in law, policy, restructuring of curriculum and schools, new pedagogy, attitudinal changes, and financial considerations (Evans, et al., 1995;

Schleety, 2001). As early as 1995, Carr warned of the pressures of high stakes testing and the demands upon teachers to serve students with physical, mental, social, emotional, and educational deficits as a fundamental issue in education. More recently, Guerin and Male (2006) point to the difficulties which schools face as reform demands higher student achievement which may not account for individual disabilities, and which may result in schools receiving sanctions for low performing special education populations.

Kohn (2010) provides discourse on the negative impact of standardized testing, standards based curriculums, and the impending focus upon national standards. His premise is based upon legislative accountability measures such as No Child Left Behind which ‘squeeze the life’ out of teaching and learning, and prescriptive teaching which does not meet the purpose of preparing students for life in a fast changing society. Kohn contends the uniformity in education results in neither excellence nor equity for students, and the creation of national standards fulfills the interests of business, but fails to meet the needs of educating children.

Legislative Impact

According to Johnston (1993) and Winzer and Mazurek (2000), legislators have responded to demands for change through the mandates of standardized testing and accountability measures. The emergence of legislation such as the No Child Left Behind Act of 2001(Ratcliffe & Willard, 2006) and Individuals with Disabilities Act (Ratcliffe & Willard, 2006; President’s Commision, 2001), show a strong disposition toward providing the appropriate education for each individual. NCLBA requires that all students receive access to general education curriculum at their assigned grade level, and additionally, that all students meet state standards of proficiency on state assessments. Ratcliffe and Willard (2006, p.2) cite No Child Left Behind in stating the purpose of the legislation: “to insure that all children have a fair, equal,

and significant opportunity to obtain a high-quality education and reach, at minimum, proficiency on challenging state academic achievement standards and state academic assessments.” The most successful reform efforts emphasize standards for teaching and learning, staff development of teachers, high quality teaching, and performance based curriculum (Darling Hammond, 2003, as cited in Atkinson & Geiser, 2009, p. 674).

No Child Left Behind is the latest effort to address academic failure which has existed throughout the history of public schooling. Educators have always struggled with the plight of failing students. Educators had many diagnoses and prescriptions for such pupils and disagreed about how to reach the children left behind (Tyack, 2003): Were students mostly the same or mostly different? Should the laggards be tracked and given as separate curriculum, or should all students be helped to learn the same subjects?

No Child Left Behind also mandates that students with special needs must be served in the least restrictive environment in their neighborhood school (Yessel, et al., 2007). Yessel, et al. indicate as well, that general education assumes the responsibility for educating special students. Ratcliffe and Willard (2006) define least restrictive as the environment which is as close to a general education class as is practicable; most often being the general education classroom. School districts throughout the United States have a dual focus today; they must meet the targets for increasing inclusion while producing higher academic outcomes for their special populations (Kalambouka, et al., 2007).

Walsh, et al. (2005) note the implicit foundation of least restrictive environment as the first consideration for placement of a student with special needs, however, a full continuum of services must be available to these learners in the provision of an appropriate education. Walsh,

et al. also note that as of 2005, there had been no cases dealing with LRE brought to the Supreme Court.

No Child Left Behind mandates that all student progress must be monitored yearly through assessment. These assessments should measure student knowledge of the state's required content standards through a norm referenced format. This assessment system should be equivalent for all students in the state. Annual measurement for all students is required in reading and mathematics, grades three through eight, and in science, grades five, eight, and ten. This annual measurement allows schools and parents to track the progress each child has made in reading and mathematics and to provide appropriate interventions to every student. Annual measurement has brought education to new and different levels in Texas in the past decade. The annual administration of tests such as TABS, TEAMS, and TAAS brought attention to the annual achievement of each student. The requirements of NCLB have narrowed the focus to student achievement as linked to teacher performance. The evolution of testing instruments has refined this focus, and is currently administered as the TAKS test. In 2008, students in special education were administered TAKS by their respective grade levels, as opposed to being tested at their identified achievement levels. This change impacts every teacher and every child with a disability as scores for special populations are factored into a school's accountability (Yell, et al., 2006).

No Child Left Behind and IDEIA have greatly impacted education. Where once children were routinely sent off to a separate classroom for services; this paradigm is now being challenged by parents, researchers, and special education instructional leaders (Osgood, 2008). No Child Left Behind mandates that all students receive on grade level instruction in the least restrictive setting. This stipulation in the law compels educators to open their classroom doors to

students with diverse learning needs. The law is clear regarding the provision of programs designed to meet the individual needs of students. Inclusive schools provide an individualized approach through the provision of supplemental aids and services designed to support each child to succeed. When successfully implemented, inclusion provides a continuum of supports which enable students with disabilities to participate and succeed in the general education classroom. There is a growing body of evidence which supports inclusive programs and positive student outcomes for students with and without disabilities (NCERI, 1996). However, Johnston (1982, p. 43) cautions us: “One must not simply present an image of utopia and hope for success.” Smith (2007) reminds us that utopia is still a distant dream, describing progress toward inclusion in the United States as slow.

The notion of providing access to the general education curriculum has far-reaching implications for teachers; they must accommodate diverse needs and modify curriculum to meet the educational challenges of all their special learners while ensuring mastery of grade level instruction. While this concept is not new to teachers, there has never been accountability to the learning of students with special needs. Inclusive education is not a new concept; educators have been practicing a modified form of it for many years (Winzer & Mazurek, 2000). However, while the sporadic practice of inclusion has been cultivated among a select few teachers, the philosophical acceptance of inclusive education has yet to be witnessed systemically across large, urban districts. Likewise, Loxley and Thomas (2001) present schooling as existing in a revolution whereby governments around the globe grapple with social change agendas. Such agendas are clearly witnessed in the form of legislation here in the United States. Tomlinson (1999) reminds us that in the face of amazing gains in knowledge about how students learn, classrooms have changed very little in the past one hundred years. She insists that while we have

witnessed great progress in education through the years; classroom practices remain relatively unchanged.

In spite of legislative mandates the educational system is slow to change. NCLBA was passed in 2001, yet school districts are just beginning to address access to the general education curriculum for special education students. Provisions for proficiency on grade level state assessments and the accountability of districts, campuses, and teachers to the mastery of grade level content by special education subgroups have defined the shift from resource room to the regular classroom. Additionally, curriculum and practices which are research based provide a clear rationale for avoiding undesirable outcomes such as school failure and high drop-out rates for learners with special needs (Jones, 2009). Raynor (2007) insists good teaching practice and accountability to standards are fundamentally necessary.

Inclusion for Diverse Learners

Current research in the field of education indicates inclusion is an effective tool for serving the needs of special education students and English language learners. The unique needs of students in a border school district produce unique socio-cultural and socio-economic outcomes (Figeroa, 2005).

Advocates for inclusive education argue for the equity of inclusive practices and the need to accept diverse learners into society. Legislative reform measures such as NCLB now require inclusive environments where practicable (Yell, et al., 2006). Parents of students with special needs tend to favor inclusive settings as well (Tichenor, Heins, & Piechura-Couture, 2000). Opponents of inclusion tend to be parents with concerns for their children in the areas of safety and social interaction (Tichenor, et al).

Conclusion

Sorenson and Goldsmith (2009) emphasize the role of educational leaders as change agents: “An education leader promotes the success of every student by facilitating the development, articulation, implementation, and stewardship of a vision of learning that is shared and supported by all stakeholders” (Sorenson & Goldsmith, 2009, p. 5).

The level of relationship between the achievement rates of students with special needs and the amount of time this group spends in the inclusive environment is the anticipated area of study. Johnston (1982) enlightens those who endeavor to initiate systemic change; educational systems are bound by the shared commitment of all within the organization. A shared vision of what learning constitutes, and a common commitment toward the acceptance of special learners provides the foundation for systemic change. While data provides hard evidence of success or failure of a program, societal views of diversity and tolerance underpin the ultimate success of this measure. Slee (2001) reminds educators that in order to live together in world of diversity we must revisit the aim, structure, and content of our schools. He asks if schools are truly building on social capital so that the rhetoric of social inclusion becomes the guiding light of our shared ethos. In a text written fifty years ago, Horace Kallen (1958) invokes this very notion of the important role which a society may hold regarding human diversity:

Mankind are disposed to make an end of those other cultural identities. Under certain conditions, this disposition may become a ruling passion, the impulsion of program whose utterance by rite and rote is articulated into a creed and a code respecting human nature, human destiny, and human relations. This articulation becomes a community's dominant ideal, its ethos and its spirit. (p.16)

Abraham Lincoln embodied the ethos and spirit of tolerance, acceptance, and respect for the diversity of all humankind. His Annual Message to Congress delivered in December of 1862 lends hope and moral guidance yet today: “It is not can any of us imagine better but, can we all do better?...We-even we here- hold the power, and bear the responsibility...” (Abraham Lincoln, 1862, as cited in Blasler, 2007, p. 16).

Summary

The history of education, and special education in particular, has been a long evolutionary process which reflects the social attitudes toward the disabled. The passage of time has witnessed a change in the way society views members with special needs; from a period in time when the disabled were considered evil and were abused and locked away, to a day in time when the disabled are welcomed into classrooms to learn side by side with their non disabled peers.

Legislative mandates such as No Child Left Behind and Individuals with Disabilities Education Act have required schools to include students with disabilities in the general education classroom. In addition, the consideration of special education test scores in school and district accountability further ensures that students receive on grade level instruction in the least restrictive setting. Legal mandates examining disproportionality in special education, as well as research supporting the impact of socioeconomic status upon student achievement, set the stage for providing appropriate, culturally responsive instruction for the diverse learners in schools today.

Developing and providing inclusive environments for students with special needs is a process which demands great care in planning as well as professional development of teachers. Including students with diverse special needs in the general education classroom has both advocates and adversaries; parents, teachers, and students can be found on both sides of the issue. For those in the educational system today, the provision of inclusive environments for special learners bodes well for society and all of its individual members.

Chapter 3

Methodology

Introduction

The Northern Pass Independent School District initiated in 2008, a district-wide focus upon improving inclusionary environments for students in more than ninety campuses. The district had implemented inclusion in 2002; however, the provision of inclusive environments was sporadic at best. In 2008, most campuses began the process with a district-wide initiative, as mandated by federal statute and U. S. Court of Appeals for the Fifth Circuit, dating back as far as 1989 with the lead case *Daniel R. R. v. State Board of Education* (Walsh, Kemerer & Maniotis, 2010).

This researcher became a member of the district level special education department in Northern Pass I.S.D. in 2008 and has been deeply involved in the provision of inclusion throughout this large urban district in the past few years. The very nature of special education (Heward, 2003) is the provision of specialized instruction based upon the students Individual Education Plan (IEP). This individual education plan developed by the admission, review, and dismissal (ARD) committee develops the goals and objectives for each student based upon individual need. A student's IEP and disabling conditions are unique to each student and therefore require each campus to formulate specially designed instruction tailored to the needs of the student (Heward, 2003). Researchers in the field, such as Villa and Thousand (1995) stress the importance of an inclusive program which is formulated through collaborative planning at the campus level with individual student needs in mind. While there are best practices in the provision of inclusion, such as collaborative teaming, co-teaching, and differentiation of instruction (Villa, et al., 2004; Tomlinson, 2003), there is not one model for inclusion which will

address the extreme variation among elementary, middle, and high schools; but rather, each school must address the development of inclusive attitudes and belief systems (Doyle, 2001).

Prior to 2008, special education students were tested with a state developed alternate assessment (SDAA) which measured student learning at their achievement levels rather than the knowledge and skills required at their assigned grade level (TEA, 2010). Beginning in 2008, special education students were administered the Texas Assessment of Knowledge and Skills test (TAKS) at their assigned grade level. However, special education students may qualify to take TAKS Accommodated with accommodations (such as graphic organizers) or TAKS Modified, a modified version of the regular TAKS test, at each grade level. The TAKS and TAKS Accommodated tests are both on grade level achievement tests which measure on grade level curriculum. The TAKS Modified is an achievement test which also measures grade level content with an achievement standard slightly below grade level (TEA, 2010). The testing data prior to 2008 reflects special education students tested on the state developed alternate assessment (SDAA) which tested a student at his or her achievement level. Beginning in 2008, however, special education students were administered the TAKS test, which measures achievement at a student's assigned grade level. Due to the discrepancies between the SDAA (prior to 2008) and the TAKS, the two testing measures are non-comparable for the purposes of this study.

Purpose of Study

The examination of inclusionary programming in the Northern Pass Independent School District beginning in 2008 provides the framework for this study. As an administrator who is deeply involved in this project, a study of the impact of the amount of time which a student with special needs participates in the inclusive environment (as measured by PEIMS data) upon special education student achievement passing rates should provide a wealth of knowledge

concerning the effectiveness of current inclusionary programming. The district-wide focus on inclusion initiating in 2008, combined with new achievement testing measures (TAKS, TAKS Accommodated, and TAKS Modified) for the special education subpopulation, also beginning in 2008, sets the stage for this particular study. The results of this study will be utilized not only for the completion of this researcher's doctoral studies, but more importantly, for the development of highly effective inclusionary programming for students in the Northern Pass Independent School District.

It is anticipated that this study will contribute to the scholarly field of research in the area of inclusion. There is minimal data pertaining to the amount of time in the inclusive setting and the achievement scores of learners with special needs. The results of the study will contribute to the limited body of research in this area of study.

Research Questions

The amount of time a student spends in the inclusive environment and its impact upon the achievement rates of students with special needs as measured by the state standardized assessment (Texas Assessment of Knowledge and Skills, TAKS) is the focus of this study. The primary research hypothesis is:

Reading and math TAKS passing rates of students with special needs will be predicted by the amount of time a student with special needs spends in the inclusive classroom.

Related research questions and hypotheses follow:

- ✚ Does amount of time included significantly predict the passing rate on TAKS reading over time (2007-2008 and 2008-2009)? It is predicted that there are higher reading passing rates for those special learners who spend more time included in the general education classroom.

- ✚ Does amount of time included in the general education setting significantly predict the passing rate on TAKS mathematics over time (2007-2008 and 2008-2009)? It is predicted that the mathematics scores of students with special needs will show higher passing rates for those students who spend more time included.
- ✚ Does SES significantly predict the passing rate on TAKS over time? It is predicted that SES will not significantly predict passing rates on TAKS.
- ✚ Are reading and mathematics TAKS passing rates similar for this cohort over time? It is predicted that reading scores will show higher passing rates than math for students with special needs in this cohort over time.

Participants and Sample

This study is an analysis of secondary source data for a cohort of special education students during the 2007-2008 and 2008-2009 ($N=248$) school years. The study will include all third grade students with special needs in the district who were administered TAKS, TAKS Accommodated, or TAKS Modified in 2007-2008, and who were administered these tests in fourth grade in 2008-2009. The selection of this sample allows for a representative cross-section of students with special needs from campuses across the district.

Third and fourth graders typically have only one teacher who instructs them in both reading and math. Fewer teachers who are involved in the instruction will contribute fewer factors to be controlled in the study. Therefore, third graders were the optimum choice for study.

Finally, the effects of inclusion upon students with special needs in the early years of school will provide data for this researcher in the improvement of instructional programming in the foundational years of schooling. Programming targeted toward the improvement of

educational outcomes in the elementary years will provide strong systemic parameters which may continue well beyond the early years of schooling.

Dependent Variable

The dependent variable of TAKS testing scores, reported as passing or failing, correspond to the three versions of the test (TAKS, TAKS Accommodated, and TAKS Modified) taken by students with special needs. Accountability standards in the state of Texas currently analyze student testing data according to passing or failing standards. This practice at the state level results in district and campus level disaggregation of individual student data by passing or failing rates. The state rating system for school districts is based upon the passing and failing rates of every campus within each district (TEA, 2010). At the school district level, student achievement data is disaggregated by passing and failing rates, thus allowing the individual campuses to apply necessary interventions for those students in the failing group. Examination of the passing rates on state achievement tests allows the researcher to align the research study to current standards of accountability. Thus, reading and math passing rates for each version of the test will be analyzed over time, in 2007-2008, and 2008-2009; resulting in four regression analyses. In 2010, the state began reporting student achievement scores in a vertical scale format for the measurement of student growth over time. Such reporting measures will allow the researcher to continue a deeper study tracking student achievement and growth beyond the current reporting.

Independent Variables

LRE. The amount of time which a student with special needs spends in the general education setting is considered the 'least restrictive environment' (PEIMS data). IDEA mandates that students with special needs be educated with non-disabled students to the

maximum extent appropriate to the child and should be removed from the general education setting only when the nature and severity of their handicapping conditions cannot be supported in the general classroom (Ratcliffe & Willard, 2006). The variable of least restrictive environment will be noted by Instructional Setting PEIMS codes of 40, 41, 42, 43, and 44 with variations of students within each coding.

Socioeconomic Status (SES). The socioeconomic status of a student with special needs will be examined in relationship to the TAKS passing rates for each student to determine the impact which SES may have upon passing rates on the state standardized achievement test. For the purposes of this study, socio economic status will be determined by student lunch status. Whether a student pays for lunch, or receives free or reduced lunch will serve as the proxy for SES. Socioeconomic status of the students in the research study is noted in Table 3.1.

INSERT TABLE 3.1 HERE

While gender is not a variable in this study, research notes boys outnumber girls by almost 3:1 in special education. Additionally, most boys are referred for special education because of aggressive or anti-social behaviors (Heward, 2009). The gender of students in Northern Pass Independent School District included in this research study is noted in Table 3.2.

INSERT TABLE 3.2 HERE

A study conducted by the Office of Special Education and Rehabilitative Services in 2006 found that 87.1 % of special needs students were included in the general education classroom for less than 21% of the school day (Ratcliffe & Willard, 2006). This study provided the foundation for the least restrictive guidelines which school districts implement today. Data is gathered and collected yearly by school districts to determine the ratio of least restrictive environment (PEIMS instructional setting) for every child in every school district. The state

mandates that districts meet a minimum .21 ratio (Dallas I.S.D., 2007). Categories for inclusion are assigned PEIMS (Public Education Information Management System) codes corresponding to percentages of time included in the general education setting. A student included 100% of the day receives PEIMS code 40. A student included 79% or more of the day is assigned PEIMS code 41, the student included 50% of the day is assigned PEIMS code 42, a student included 40%-50% of the day is assigned a PEIMS code of 43, and the student included less than 40% of the day is assigned a PEIMS code of 44. Thus, a student's level of inclusion is defined by an Instructional Setting (PEIMS) coding of 40, 41, 42, 43, or 44.

Data Analysis

Statistical analyses will be conducted to determine the impact which level of inclusion has upon the reading and math achievement passing rates of special education students over time. The researcher will utilize a logistic regression analysis with amount of day included (as indicated by Instructional Setting PEIMS code 40-44) as the primary predictor of the outcome variable, TAKS passing rate. The model will control for the variable of socioeconomic status (SES); however, while SES may be predictive of outcomes, the amount of time included in the general education setting is the primary predictor variable. A total of four regression analyses will be performed to represent each subject and each testing year. For example, the first regression analysis will use TAKS reading scores 2008 while the second regression analysis will examine TAKS mathematic scores 2008. Data will be analyzed separately for TAKS, TAKS Accommodated, and TAKS Modified.

The use of a logistic regression model will allow the researcher to determine if the variable of amount of time included serves as a predictor of TAKS passing rates for students with special needs. Logistic regression is ideal when the dependent variable is categorical such

as passing or failing test scores on the state standardized test (Espinoza, 2010; Peng, Lee, & Ingersoll, 2002). Regression serves to determine the significance of the variable of amount of time in the inclusive setting for predicting the standardized test passing rates of students with special needs.

A Spearman Correlation will be introduced to measure the relationship between the predictor variable and the outcome variable in this research design. A negative correlation is expected, such that as the PEIMS instructional code decreases (indicating greater time included), TAKS passing rates will increase. For example, a negative correlation would show higher TAKS passing rates correlating with lower PEIMS instructional coding, such as 40 and 41 (more time included). Conversely, a positive correlation would show higher TAKS passing rates correlated with higher PEIMS instructional coding, such as 44 (least amount of time included).

A Spearman correlation will assist the researcher in determining the degree of consistency in the relationship between the predictor variable of amount of time included in the general education setting and the outcome variable of achievement as measured by state standardized test passing rates (Gravetter & Wallnau, 2007). While the Pearson correlation is a commonly used statistical measure, the Spearman correlation measures consistency of relationship while Pearson measures a definite linear relationship. The use of PEIMS instructional setting codes of 40, 41, 42, 43, and 44 represent the amount of time a student spends in the general education setting, and this type of rank ordering of instructional codes best fits the use of a Spearman correlation. While Pearson correlation notes a linear relationship, the Spearman correlation allows for a consistent relationship which may not be completely linear (Gravetter & Wallnau).

In this study, the hypothesis of the strength of relationship between the amount of time spent in the inclusive setting and its predictive validity regarding the standardized test passing rates for students with special needs is the central question. The hypothesis would state that there is a statistically significant correlation between the amount of time included and student achievement passing rates. The null hypothesis would note that there is no correlation between amount of time in the inclusive setting and student achievement passing rates as measured by the state standardized test.

Permission to access data for the study has been granted by the research and evaluation department of the Northern Pass Independent School District. The data analyzed will identify student names and identification numbers however, the researcher will not reveal this confidential information. Data analysis will occur at the group level to maintain the anonymity of individual students. All district data will be stored in a locked cabinet for the purposes of respecting confidentiality.

Limitations of Study

The Northern Pass Independent School District is located within a large urban area in the southwestern United States and serves approximately 65,000 students with 5,500 of those students identified as special education students. The demographics of the school district provide the backdrop for this study, but certainly are not within the control of the researcher.

The original cohort of students followed over a two year period will show attrition of some students from the cohort and therefore, results will be limited to the remaining students. While the students represent a cross section of the city, there are more students in the low socio economic bracket.

The achievement passing rates of third and fourth grade students as measured by the TAKS test fails to take into account the impact of the teacher upon the acquired knowledge of the students. The study does not control for the individual variation of talent which teachers possess in the instructional process.

Inclusion in the Northern Pass Independent School District reflects the individual needs of campuses as regards student need and campus support. Students who are self-contained special education students may spend a portion of their day with a self-contained special education teacher, and a portion of the day included with a general education teacher; in other words they are served by two different types of teachers. The differences in teaching ability and level of expertise between the special education teacher and the general education teacher most certainly impact student achievement, but are not investigated in this study.

Many students with special needs who are included in the general education setting also receive resource room assistance. They may receive instruction in the general education classroom and then attend a special education resource classroom with a special education teacher who assists them in a small group arrangement with their assignments. The resource room is a more restrictive setting than the general education classroom, and as such, time spent in the resource room impacts the PEIMS coding for inclusion. The models for inclusion differ from campus to campus, and the use of the resource classrooms vary greatly, and are not controlled factors within this study.

The level of student disability is loosely linked to Instructional Setting PEIMS code. Students with milder disabilities tend to be included more than students with severe disabling conditions. However, the realities of a student's strengths and weaknesses, and the specific disabling conditions which frame a student's navigation of the school setting are variables which

may or may not provide limitations to the instructional benefits provided and received. The varying types and degrees of specific disability and their link to achievement are not within the scope of this study, but most certainly impact student achievement.

The use of PEIMS data to track students with special needs reflects multiple issues in coding. A student may be coded 40 in their third grade year, but moved to a more restrictive setting the next year and coded 42. The movement from one instructional setting to another, and the impact which a change in placement may have upon a student with special needs is beyond the context of this study.

Research in the field of reading currently notes that a vast majority of students in special education qualify for those services through a reading disability (Shaywitz, 2003). The impact of a reading disability upon reading passing rates is certainly highly linked. However, the effect of a reading disability upon mathematics passing rates may be more difficult to prove.

The integrity and fidelity with which teachers adhere to the provision of inclusive and culturally responsive classrooms with appropriate individualized instruction based upon student need is fundamental to student success. The ability to ensure integrity of implementation and fidelity to inclusive and culturally responsive practices is beyond the scope of this study. However, data gleaned through this study will be utilized to further develop and support inclusive and culturally responsive instructional practices throughout the district.

Finally, there is much variation in maturity, knowledge, ability, interest, motivation, disability and life conditions between the third and fourth grade student. Comparing test data from a cohort of children from third and fourth grade has a multitude of such uncontrolled variables which interact continuously over time, and the ability to make definitive statements regarding achievement of children should remain strictly within the context of this study.

Delimitations of Study

Although the Northern Pass Independent School District student population reflects a low socio-economic bilingual population, the results of the study are limited to the cohort of third graders followed from 2007-2009. The generalizability of the results is limited to this particular district and these particular students.

The TAKS test measures mastery of grade level standards. It is, by no means, the only way to measure student strengths and ability, and the study is defined by the limits of this test. Lastly, the analysis of the impact of inclusion upon learners with special needs, by virtue of achievement rates, limits itself to the examination of children's weaknesses. In a world of diversity, and a future filled with even greater diversity, educators must be ever mindful of the strengths and gifts which each and every child bring into the classroom daily; nurturing and developing students to fulfill their own destinies. Every child is the future.

Summary

Chapter three initiates with a description of the Northern Pass Independent School District which is a large urban district in the greater continental Southwest with a large majority of students in the low socio-economic category. A discussion of the state achievement tests which a student with special needs may be administered follows. Students with special needs may be administered the regular TAKS or they may take TAKS Accommodated or TAKS Modified. The reasons for excluding testing data prior to 2008 is included. Following the discussion of achievement testing, the purpose of the study brings to light the researcher's plan to study school district data regarding the impact of inclusion upon students with special needs with the intention of designing and implementing district frameworks for improving instructional programming for special learners in the district. The research design utilizing a logistic regression model is presented as the appropriate tool for analyzing student testing data over time. The research hypothesis is presented next with four research questions for study. Limitations such as teacher capacity and student level of disability, as well as delimitations of the study, such as teacher effectiveness and level of student disability, bring the chapter to closure.

Chapter 4

Data Analysis

The data collected from the original third grade cohort of students with special needs ($N=248$) in Northern Pass Independent School district beginning in the 2007-2008 school year was analyzed to determine the impact of inclusion upon students' Texas Assessment of Knowledge and Skills (achievement test) passing rates. While student test scores for the 2007-2008 and 2008-2009 school years were reported in a horizontal scale format which set a passing score at 2100 for every student at every grade level, the 2009-2010 score reporting system initiated a vertical scale score format. The current accountability reporting system for the state of Texas is based upon passing rates for all student populations. For this reason, this study examined the TAKS passing rates of students with special needs over time from 2007-2008 and 2008-2009.

Research Questions

The amount of time a student spends in the inclusive environment and its impact upon the achievement rates of students with special needs as measured by the state standardized assessment (Texas Assessment of Knowledge and Skills, TAKS) is the focus of this study. The primary research hypothesis as stated in chapter three is:

Reading and math TAKS passing rates of students with special needs will be predicted by the amount of time a student with special needs spends in the inclusive classroom.

Related research questions and hypotheses follow:

- ✚ Does amount of time included significantly predict the passing rate on TAKS reading over time (2007-2008 and 2008-2009)? It is predicted that there are higher reading

passing rates for those special learners who spend more time included in the general education classroom.

✚ Does amount of time included in the general education setting significantly predict the passing rate on TAKS mathematics over time (2007-2008 and 2008-2009)? It is predicted that the mathematics scores of special needs learners will show higher passing rates for those students who spend more time included. Data from the N.P.I.S.D. indicates that reading scores are typically higher than mathematics scores for most grade levels.

✚ Does SES significantly predict the passing rate on TAKS over time? It is predicted that SES will not significantly predict passing rates on TAKS.

Contrary to current research in the field linking socioeconomic status to student achievement, it is this researcher's belief that this will not hold true for students with disabilities. Perhaps the effects of disability overshadow the effects of socioeconomic status for this group of students.

✚ Are reading and mathematics TAKS passing rates similar for this cohort over time? It is predicted that reading scores will show higher passing rates than math for students with special needs in this cohort over time.

Prior to hypothesis testing, frequencies were run to determine 1) the socioeconomic status of the students in the study, 2) gender of the students in the study, and 3) the number of students in each instructional category in each year of the study.

Socioeconomic Status

For the purposes of this study, lunch status for special education students served as the proxy for socioeconomic status. Students with a lunch code of 0 paid for their lunch, while

students with a lunch code of 1 received a free or reduced lunch rate. Data from the Research and Evaluation Department of the Northern Pass Independent School District from 2007-2009 shows fifty-one students (20%) in the original cohort with a lunch code of 0 with two hundred students (80%) in the low SES category. Achievement gaps among low SES groups has been noted and studied extensively in the past decade (Clarkson, 2008). Clearly, a vast majority of students fall into a low socioeconomic category as indicated by free or reduced lunch status.

Gender

Data gathered from the Northern Pass Independent School District from 2007-2009 reflecting the gender status of special education students included note seventy female special education students (28%) and one hundred eighty-one males (72%) in the original cohort. It is clear that males outnumber females by a nearly 3:1 ratio in this cohort of students. Data on secondary students indicates two-thirds of students identified for special education services are male and seventy-three percent of students identified with a learning disability are male (Coutinho & Oswald, 2005). Coutino and Oswald note the trend for the overrepresentation of males receiving special education services from elementary through secondary school.

Instructional Setting

The instructional setting for students with special needs is monitored through the Public Education Information Management System (PEIMS). As noted in chapter three, PEIMS codes for students with special needs are indicated through instructional setting codes of 40, 41, 42, 43, and 44. If a student spends 100% of their day included in the general education setting in 2007-2008, but the ARD committee determines that less time in the general education setting would be more appropriate to the individual needs of the student, then the instructional setting code for the student would show a change in the following school year. The student may have been coded 40

in 2007-2008, but coded 41 in 2008-2009. Therefore, due to the changing nature of services for students with special needs, the instructional setting (PEIMS) code could change from year to year for an individual student and therefore, frequency data tracking instructional setting is pivotal to the study.

The frequency data reflecting instructional setting for special education students from 2007-2009 reveals decreasing numbers of students identified with a PEIMS Instructional Setting code of 40 (100% of day included), with ninety-two students identified as 40 in 2008, and sixty-seven students in 2009. The instructional setting of 41 (> 79% of day included) reveals a sharp increase over time with forty-six students in 2008 and one hundred eleven students in 2009. The decrease in students coded as 40 with the increase in students coded as 41 reflects the general trend in the 2008-2009 school year to ensure that special education students had access to TAKS Accommodated and TAKS Modified through an instructional setting code which reflected the need for an accommodated or modified version of the TAKS test. The data for students coded 42 (50% - 79% of day included) reveals a decrease over time with sixty-seven students in 2008 and thirty-three students in 2009. The data for students coded as 43 (40% - 50% of day included) show 6 students in 2008 and 8 students in 2009. Data for students coded 44 (< 40% of day included) show forty students in 2008 and thirty-two students in 2009.

Overall, the frequency data shows in 2008 that most students had an instructional setting code of 40 in 2008, while in 2009, the largest set of students had an instructional setting code of 41. The change in instructional setting allowed the students greater access to an accommodated or modified version of the Texas Assessment of Knowledge and Skills. The data representing the instructional setting of this cohort of students from 2007-2009 is shown in Table 4.1.

INSERT TABLE 4.1 HERE

Mathematics 2007-2008

Crosstabulations were run for instructional setting and achievement test type for mathematics from 2007-2009. The research study involved analyzing the amount of time a student with special needs was included in the general education classroom and the relationship to TAKS achievement passing rates in reading and mathematics 2007-2009. Students with special needs may be administered several versions of the TAKS test. In addition, the amount of time a student is included in the general education setting (instructional setting) may vary from student to student and year to year. Such vital components in the study required crosstabulations comparing 1) amount of time included (instructional setting) and the type of TAKS test administered, 2) instructional setting and pass/fail rates by TAKS test, 3) logistic regression analyzing the amount of time included as a predictor of TAKS achievement passing rates for students with special needs, and 4) correlations among TAKS, TAKS Accommodated, and TAKS Modified mathematics 2007-2009.

Instructional Setting and TAKS Mathematics Test Type

Each instructional setting category (PEIMS 40-44) was crossed with the numbers of students who took each type of TAKS test: TAKS, TAKS Accommodated, or TAKS Modified. Data representing the instructional setting of students and the type of TAKS mathematics test administered 2007-2009 is presented in Table 4.2.

INSERT TABLE 4.2 HERE

2007-2008 Instructional Setting and Mathematics

There were a total of two hundred forty-eight third graders with special needs in the cohort of students administered a TAKS exam in 2007-2008. This number represents all third graders across the district with a disability code and an instructional setting of 40, 41, 42, 43, or

44. The data shows twenty-seven (10.9%%) students were administered TAKS, one hundred-twelve students (45.2%%) were administered TAKS Accommodated, and one hundred nine students (14.4%) were administered TAKS Modified.

Students coded 40

Of the total number ($N=248$), there were ninety-two students with special needs coded with an instructional setting of 40 (100% of day included). Of the ninety-two students coded as 40, fifteen students were administered the regular TAKS. Of the fifteen, 2 students failed the exam (13.3%), thirteen students with special needs passed the exam (86.7%). Sixty-two students were administered the TAKS Accommodated, twenty-seven of these students failed the exam (43.5%) thirty-five students passed (56.5%). Finally, in the 40 category, there were fifteen students administered TAKS Modified, 1 student failed the exam (6.7%), fourteen students passed the exam (93.3%).

Students coded 41

For students with an instructional code of 41 (>79% of day included), there were a total of forty-five students in this category. Of the forty-five students, 8 students (17.8%) were administered TAKS, twenty-five students (55.6%) were administered TAKS Accommodated, and twelve students (26.7%) were administered TAKS Modified. Of the 8 students who were administered the regular TAKS, 5 of these students failed the exam (62.5 %), 3 students passed the exam (37.5%). Twenty-five students were administered the TAKS Accommodated, fourteen failed the exam (60%), ten passed the exam (40%). Of the twelve students administered TAKS Modified, 1 student failed the exam (8.3%), eleven passed the exam (91.7%).

Students coded 42

There were a total of sixty-six students coded as 42 (50%-79% of day included). Of these sixty-six students, 4 students (6.1%) were administered TAKS, fifteen students (22.7%) were administered TAKS Accommodated, and forty-seven students (71.2%) were administered TAKS Modified. 4 of these students were administered the regular TAKS, 2 failed the exam (50%), 2 passed the exam (50%). For the students administered the TAKS Accommodated, 9 students failed the exam (60%), 6 passed the exam (40%). Of the forty-seven students administered the TAKS Modified, 7 students failed the exam (14.9%), forty students passed the exam (85.1%).

Students Coded 43

There were 6 students coded 43 (40% - 50% of day included), with no students taking TAKS, 2 students (33.8%) administered TAKS Accommodated, and 4 students (66.7%) administered TAKS Modified. Of the 2 students administered the TAKS Accommodated 1 student failed the exam (50%), 1 student passed the exam (50%). The remaining 4 students were administered the TAKS Modified, 2 students failed the exam (40%), 2 students passed the exam (50%).

Students coded 44

There were thirty-nine students coded 44 (<40% of day included) with no students administered TAKS, 8 students (20.5%) administered TAKS Accommodated, and thirty-one students (79.5%) administered TAKS Modified. Of the 8 students administered the TAKS Accommodated, 3 students failed the exam (37.5%), 5 students passed the exam (62.5%). Of the thirty-one students administered TAKS Modified, twenty-four students failed (77.4%), 7 students passed (22.6%).

TAKS Mathematics 2007-2008

The crosstabulation for instructional setting and TAKS pass/ fail rates in the 2007-2008 school year reveals a total of twenty-seven students administered the regular TAKS across all instructional settings (40-44). Of the twenty-seven students, 9 failed the TAKS (33.3%) and eighteen passed the exam (66.7%). Almost two-thirds of all students with special needs (coded 40, 41, and 42) passed the regular TAKS mathematics exam in 2007-2008. There were no students coded 43 or 44 administered the regular TAKS, as these tend to be students with more severe disabilities. Students coded as 40 passed at a rate of 86.7%, those coded as 41 passed at a rate of 37.5%, and those coded as 42 passed at a rate of 50%. For those students administered the regular TAKS, students showed increased passing rates with increased time in the general education setting. Crosstabulations for instructional setting and TAKS mathematics pass/fail rates are presented in Table 4.3.

INSERT TABLE 4.3 HERE

TAKS Accommodated 2007-2008

The crosstabulation for instructional setting and pass/fail rates for mathematics in 2007-2008 reveals a total of one hundred twelve students across all instructional categories (40-44) administered the TAKS Accommodated. Of the one hundred twelve students, fifty-five of these students failed the TAKS Accommodated (49.1%) while fifty-seven of the students passed the exam (50.9%). The largest category passing the TAKS Accommodated were the students coded 44 at 62.5% passing, followed by students coded 40 with a 56.5% passing rate. Students coded 43 passed at a 62.5% rate and students coded 41 and 42 passed at a 40% rate. Although the students included the least amount of time each day passed the TAKS Accommodated at the highest rate, they were followed by those students who were fully included each day. Data

reflecting the pass/fail rates of students administered TAKS Accommodated mathematics is presented in Table 4.4.

INSERT TABLE 4.4 HERE

TAKS Modified 2007-2008

The crosstabulation for instructional setting and pass/fail rates on TAKS Modified in 2007-2008 notes a total of one hundred nine students were administered the TAKS in a modified version. Across all instructional settings, thirty-five students failed the TAKS Modified (32.1%) and seventy-four students passed the exam (67.9%). The greatest number of students passing the TAKS Modified exam were students coded 40 at a passing rate of 93.3%. Students coded 41 passed at a rate of 91.7% and students coded 42 passed at a rate of 85.1%. Those students coded 43 passed at a rate of 50% and students coded 44 passed at a rate of 22.6%. For those students with special needs administered the TAKS Modified exam, increased passing rates correspond to increased amounts of time included in the general education setting. A crosstabulation for instructional setting and TAKS Modified mathematics pass/fail rates is presented in Table 4.5.

INSERT TABLE 4.5 HERE

Logistic Regression for Mathematics 2007-2008

A logistic regression analysis was conducted with amount of day included (as indicated by Instructional Setting PEIMS code 40-44) as the primary predictor of the outcome variable, TAKS passing rate. The model will control for the variable of socioeconomic status (SES); however, SES may be predictive of outcomes, the amount of time included in the general education setting is the primary predictor variable. A Spearman correlation will allow the researcher to determine the degree of consistency in the relationship between the predictor variable of amount of time included in the general education setting and the outcome variable of

achievement as measured by state standardized test passing rates. The use of PEIMS instructional setting codes of 40, 41, 42, 43, and 44 represent the amount of time a student spends in the general education setting, and this type of rank ordering of instructional codes best fits the use of a Spearman correlation.

Instructional Setting (Inclusion)

The logistic regression for mathematics 2007-2008 shows the overall model is more effective than the null model (intercept-only model with no predictors), $X^2(6) = 38.64, p < .01$. The Hosmer and Lemeshow Test also shows the data fits the model well, $X^2(6) = 6.62, p = .36$. The regression equation was tested to determine primarily if the variable of amount of time included predicts passing scores on TAKS. The log odds of passing the TAKS was significantly related to instructional setting 40, 41, and 42 (all p 's $< .01$). Students who are in the category of 40 (100% of day included) are nearly twelve times ($= e^{2.48}$) more likely to pass TAKS than those students in a more restrictive category of 44 (<40% of day included). Students in the 41 category (>79% of day included) are 5.42 times ($= e^{1.69}$) more likely to pass TAKS when compared to students in the category of 44 (<40% of day included). Students who are coded 42 (50-60% of day included) are 7.53 times ($= e^{2.02}$) more likely to pass TAKS than students coded 44 (< 40% of day included). Students with a code of 43 (>50% of day included) are 2.87 times ($= e^{1.06}$) more likely to pass the TAKS than students with a code of 44.

Type of TAKS Test

The type of TAKS test also significantly predicts TAKS passing rates, $p < .01$. In other words, the particular version of the TAKS test administered to students with special needs significantly predicted passing rates on TAKS mathematics in 2007-2008.

Socioeconomic Status

Most interesting to note is the data regarding SES and mathematics passing rates. For those students with an instructional setting of 40, 41, 42, and 43, socioeconomic status is not related to passing rates on TAKS mathematics in 2007-2008, $p = .53$. The model summary, Hosmer and Lemeshow Test, and mathematics and socioeconomic status are presented in Table 4.6. The regression equation is presented in Table 4.7.

INSERT TABLE 4.6 HERE

INSERT TABLE 4.7 HERE

Correlation Matrix

A correlation matrix demonstrates 1) the correlation between each category of instructional setting, 2) the correlation between SES and instructional setting, and 3) the correlation between instructional setting and type of TAKS test. PEIMS 40 shows a strong correlation to PEIMS 41, $r = .71$, and LRE 42, $r = .65$, with a weaker correlation to PEIMS 43, $r = .31$. PEIMS 41 shows a strong correlation to PEIMS 40, $r = .71$, and PEIMS 42, $r = .60$, with a weak correlation to PEIMS 43, $r = .29$. The correlation between SES and instructional setting of 40 shows no strong correlation to PEIMS 40, $r = .07$. SES and instructional setting 41 show no strong correlation with $r = .03$. SES and PEIMS 42 show no strong correlation with $r = .08$. SES and instructional setting 43 show no strong correlation with $r = .01$. The type of TAKS test shows a moderate correlation to PEIMS 40, $r = .55$; a weaker correlation to PEIMS 41, $r = .42$; with less correlation to PEIMS 42, $r = .21$ and LRE 43, $r = .08$. Overall, the correlation matrix shows strong relationships among all categories of instructional setting, strong relationship between instructional setting and type of TAKS test for categories 40 and 41, and no relationship between SES and instructional setting. The correlation matrix is presented in Table 4.8.

INSERT TABLE 4.8 HERE

Correlations for Mathematics 2007-2008

Correlations among TAKS, TAKS Accommodated, and TAKS Modified 2007-2008 in mathematics were tested with a Spearman correlation. The regular TAKS exam shows correlation to the amount of time included in the general education setting, $r = -0.43$, $p = .024$. The TAKS Accommodated shows no correlation to the outcome variable, $r = -0.09$, $p = .33$. Finally, the TAKS Modified shows a significant correlation to the outcome variable, $r = -0.58$, $p < .01$. Spearman correlations are presented in Table 4.9.

INSERT TABLE 4.9 HERE

The Spearman correlation shows a significant correlation between instructional setting and mathematics passing rates, $r < .05$, $p = 0.01$ as well as a correlation to the type of TAKS test administered, $r < .01$, $p < .01$. The data indicates a correlation between the passing rate on the mathematics test and the type of TAKS test administered $r < .01$, $p < .01$. Overall, for mathematics 2007-2008, the amount of time a student spends included in the general education setting is correlated to the passing rates of students with special needs and type of TAKS test administered to this cohort of students. The results of the Spearman correlation are presented in Table 4.10.

INSERT TABLE 4.10 HERE

Mathematics 2008-2009

In the 2008-2009 school year, there were ($N=248$) students with special needs administered a TAKS mathematics exam. Of the two hundred forty-eight students, there were sixty-seven students coded as 40 with 7 students (6.4%) administered TAKS, thirty-nine students

(58.2%) administered TAKS Accommodated and twenty-one students (31.3%) administered TAKS.

Students Coded 40

Of the sixty-seven students coded as 40, 7 students were administered the regular TAKS, none of the students failed the exam, 7 students passed the exam (100%). Thirty-nine students were administered the TAKS Accommodated, eleven students failed the exam (28.2%), twenty-eight passed the exam (71.8%). Of the twenty-one students administered the TAKS Modified, 2 students failed the exam (9.5%), nineteen students passed the modified exam (90.5%).

Students Coded 41

There were forty-five students coded 41 with twelve students (10.8%) administered TAKS, thirty-six students (32.4%) administered TAKS Accommodated, and sixty-three students (56.8%) administered TAKS Modified. Twelve students were administered the regular TAKS, 3 students failed (25%), 9 students passed (75%). Of the thirty-six students administered the TAKS Accommodated, sixteen students failed (44.4%), twenty of the students passed (55.6%). There were sixty-three students administered the TAKS Modified, 4 students failed the exam (6.3%), fifty-nine students passing the exam (93.7%).

Students Coded 42

There were sixty-six students coded 42, with no students administered TAKS, 6 students (18.8%) administered TAKS Accommodated, and twenty-six students (81.3%) administered TAKS Modified. Of the 6 students administered TAKS Accommodated, 1 student failed the exam (16.7%), 5 students passed the exam (83.3%). There were twenty-six students administered the TAKS Modified, 6 students failed the exam (23.1%), twenty students passed the modified exam (76.9%).

Students Coded 43

There were 6 students coded 43, with 1 student (12.5%) administered TAKS, 2 students (25%) administered TAKS Accommodated, and 5 students (62.5 %) administered TAKS Modified. There was 1 student administered the regular TAKS who passed the exam (100%). There were 2 students in this category administered the TAKS Accommodated, 1 student passed (50%), 1 student failed (50%). There were 5 students administered the TAKS Modified with all 5 students passing the exam (100%).

Students Coded 44

There were thirty-nine students coded 44, with no students administered TAKS, 7 students (23.3%) administered TAKS Accommodated, and twenty-three (76.7%) administered TAKS Modified. Of the 7 students administered TAKS Accommodated, 4 students failed the exam (57.1%), 3 students passed the exam (42.9%). Of the twenty-three students administered the TAKS Modified, eleven students failed the exam (47.8%), twelve students passed the modified exam (52.2%).

TAKS Mathematics 2008-2009

There were a total of twenty students administered the regular TAKS mathematics test in the 2008-2009 school year. Across all instructional settings (40-44), 3 students failed the TAKS (15%), seventeen students passed the regular exam (85%). Students coded as 40 and 43 had a passing rate of 100%. Students coded as 41 had a 75% passing rate. There were no students coded 42 or 44 who were administered the regular TAKS mathematics during the 2008-2009 school year. The one student coded 43 who passed the TAKS exam appears to be the anomaly as the students fully included passed at a greater rate than those less included. The crosstabulation for

instructional setting and TAKS mathematics pass/fail rates for 2008-2009 is presented in Table 4.11.

INSERT TABLE 4.11 HERE

TAKS Accommodated Mathematics 2008-2009

The crosstabulation of instructional setting and TAKS Accommodated mathematics 2008-2009 shows a total of ninety students administered the accommodated exam. Across all instructional categories (40-44), thirty-three of the students failed the exam (36.7%), fifty-seven students passed the exam (63.3%). Students coded 40 passed the exam at a rate of 71.8%. Students coded 41 passed the exam at a rate of 55.6%, students coded 42 passed at 83.3%. For students coded 43, there was a 50% passing rate, students coded 44 had a 42.9% passing rate. Students coded 42 had the highest passing rate at 83.3% followed by students coded 40 at 71.8%, students coded 41 at 55.6%, students coded 43 at 50% and finally, students coded 44 with a passing rate of 42.9%. Students included for more time each day had higher passing rates than those less included, with the exception of the 6 students coded as 42 who had the greatest passing rate of all categories. The crosstabulation for instructional setting and TAKS Accommodated mathematics 2008-2009 is presented in Table 4.12.

INSERT TABLE 4.12 HERE

TAKS Modified Mathematics 2008-2009

The crosstabulation of instructional setting and pass/fail rates on TAKS Modified shows a total of one hundred thirty-eight students administered the TAKS Modified in the 2008-2009 school year. Across all instructional categories (40-44), twenty-three students failed the exam (16.7%), two hundred twenty-six students passed the modified exam (83.3%). Students coded as 43 passed the exam at a rate of 100%, students coded as 41 had a passing rate of 93.7%. Students

coded as 40 had a passing rate of 90.5%, students coded as 42 passed at a rate of 76.9%. Students coded 44 passed at 52.2%. For the TAKS Modified exam, students included for less than fifty percent of the day had the highest passing rates on the mathematics exam followed by students included seventy-nine to one hundred percent of the school day. The crosstabulation for TAKS Modified mathematics 2008-2009 is presented in Table 4.13.

INSERT TABLE 4.13 HERE

Logistic Regression for Mathematics 2008-2009

Instructional Setting (Inclusion)

The logistic regression for mathematics 2008-2009 shows the overall model is more effective than the null model (intercept-only model with no predictors), $X^2 (6) = 26.06, p < .01$. The Hosmer and Lemeshow Test also shows $X^2 (8) = 3.13, p = .93$. The regression equation was tested to determine primarily if the variable of amount of time included predicts passing rates on TAKS. The log odds of passing the TAKS was significantly related to LRE 40, 41, and 42 (all p 's $< .01$). Students who are in the category of 40 (100% of day included) are 9.5 times ($= e^{2.25}$) more likely to pass TAKS than those students in a more restrictive category of 44 (<40% of day included). Students in the 41 category (>79% of day included) are 5.87 times ($= e^{1.77}$) more likely to pass TAKS when compared to students in the category of 44 (<40% of day included). Students who are coded 42 (50-60% of day included) are 3.78 times ($= e^{1.33}$) more likely to pass TAKS than students coded 44 (< 40% of day included). Students with a code of 43 (>50% of day included) are 8.7 times ($= e^{2.16}$) more likely to pass the TAKS than students with a code of 44.

Type of TAKS Test

The type of TAKS test also significantly predicts TAKS passing rates, $p < .01$. In other words, the type of TAKS test a student takes is a strong predictor of passing rates on TAKS mathematics 2008-2009.

Socioeconomic Status

The data regarding SES shows no significance, $p = .34$. The data indicates that SES is not correlated to PEIMS, $p = .21$ for mathematics in 2008-2009. The model summary, Hosmer and Lemeshow Test, and mathematics and SES are presented in Table 4.14. The regression equation is presented in Table 4.15.

INSERT TABLE 4.14 HERE

INSERT TABLE 4.15 HERE

Correlation Matrix

A correlation matrix demonstrates 1) the correlation between each category of instructional setting, 2) the correlation between SES and instructional setting, and 3) the correlation between PEIMS and type of TAKS test. PEIMS 40 shows strong correlation to PEIMS 41, $r = .69$ and a slight correlation to PEIMS 42, $r = .47$. PEIMS 40 shows little correlation to PEIMS 43, $r = .27$. PEIMS 41 shows strong correlation to PEIMS 40, $r = .69$ and PEIMS 42, $r = .53$. PEIMS 41 shows little correlation to PEIMS 43, $r = .29$. PEIMS 42 shows moderate correlation to PEIMS 40, $r = .47$ and 41, $r = .53$ with weak correlation to PEIMS 43, $r = .21$. PEIMS 43 shows weak correlation to PEIMS 40, $r = .27$, PEIMS 41, $r = .29$, and PEIMS 42, $r = .21$. The correlation between SES and instructional setting of 40 shows no strong correlation to PEIMS 40, $r = .11$. SES and instructional setting 41 show no strong correlation with $r = .13$. SES and PEIMS 42 show no strong correlation with $r = .02$. SES and instructional

setting 43 show no strong correlation with $r = -.04$. The type of TAKS test shows a moderate correlation to PEIMS 40, $r = -.44$; PEIMS 41, $r = .31$; with no correlation to PEIMS 42, $r = .07$, and a weak correlation to PEIMS 43, $r = -.113$. Overall, the correlation matrix shows moderate to strong relationships among PEIMS categories of 40, 41, and 42 with moderate relationships between instructional setting and type of TAKS test for categories 40 and 41, and SES correlated to instructional setting of 42 and 43 but not correlated to instructional setting of 40 and 41.. The correlation matrix is presented in Table 4.16.

INSERT TABLE 4.16 HERE

Correlations for Mathematics 2008-2009

Correlations among TAKS, TAKS Accommodated, and TAKS Modified 2008-2009 in mathematics were tested with a Spearman correlation. Mathematics 2008-2009 shows remarkable resemblance to mathematics 2007-2008. The regular TAKS exam shows no correlation to the amount of time included in the general education setting, $r = -.25$, $p = .28$. The TAKS Accommodated shows no correlation to the outcome variable, $r = -.14$, $p = .18$. Finally, the TAKS Modified shows a significant correlation to the outcome variable, $r = -.31$, $p < .01$. Results of the Spearman correlation are presented in Table 4.17.

INSERT TABLE 4.17 HERE

The Spearman correlation shows a significant correlation between instructional setting and mathematics passing rates, $r = -.15$, $p = .02$, as well as a correlation to the type of TAKS test administered, $r = .32$, $p = .000$. The data indicates a correlation between the passing rate on the mathematics test and the type of TAKS test, $r = .21$, $p = .001$. Overall, for mathematics 2008-2009, the amount of time a student spends included in the general education setting is correlated

to the passing rates of students with special needs and type of TAKS test administered to this cohort of students. The results of the Spearman correlation are presented in Table 4.18.

INSERT TABLE 4.18 HERE

Reading 2007-2008

Instructional Setting and TAKS Reading Test Type

A crosstabulation was run for instructional setting and achievement test type for reading from 2007-2009. Each instructional setting category (PEIMS 40-44) was crossed with the numbers of students who took each type of TAKS test: TAKS, TAKS Accommodated, or TAKS Modified for reading. Data representing the instructional setting of students and the type of TAKS reading test administered 2007-2009 is presented in table 4.19.

INSERT TABLE 4.19 HERE

Instructional Setting and Reading

There were a total of ($N=248$) third graders with special needs in the cohort of students administered a TAKS exam across the district in 2007-2008. This number represents all third graders across the district who had a disability code and an instructional setting of 40, 41, 42, 43, or 44.

Students Coded 40

In the 2007-2008 school year there were ninety-two students with special needs coded 40 (100% of day included). Twenty students (21.7%) were administered TAKS, sixty students (65.2%) were administered TAKS Accommodated, and twelve (13%) were administered TAKS Modified. Of the sixty students who took regular TAKS, twenty-four students failed the exam (40%), thirty-six students passed the exam (60%). Of the twenty students who were administered the TAKS Accommodated, 1 student failed the exam (5%), nineteen students passed the exam

(95%). Of the twelve students administered the TAKS Modified, all twelve students passed the exam (100%).

Students Coded 41

There were forty-six students coded as 41(> 79% of day included), with 9 students (19.6%) administered TAKS, twenty-two students (47.8%) administered TAKS Accommodated, and fifteen students (32.6%) administered TAKS Modified. Of the twenty-two students administered the regular TAKS, ten students failed the exam (45.5%), twelve students passed the exam (54.5%). 9 students were administered the accommodated exam, 4 students failed the exam (44%), 5 students passed the exam (55.6%). Of the fifteen students administered the TAKS Modified all fifteen passed the exam (100%).

Students Coded 42

There were sixty-seven students coded 42 (50%-79% of day included), with 2 students (3%) administered TAKS, twenty students (29.9%) administered TAKS Accommodated, and forty-five students (67.2%) administered TAKS Modified. Of the twenty students administered the regular TAKS, twelve students failed the exam (60%), 8 students passed the exam (40%). There were 2 students administered the TAKS Accommodated, 1 student failed the exam (50%), 1 student passed the exam (50%). Of the forty-five students administered the TAKS Modified, 4 students failed the exam (8.9%), 41 students passed the modified exam (91.1%).

Students Coded 43

There were 6 students coded 43 (<50% of day included), with no students administered TAKS, 2 students (33.3%) administered TAKS Accommodated, and 4 students (66.6%) administered TAKS Modified. Of the students coded 43, 2 students were administered the regular TAKS. 1 student failed the exam (50%), 1 student passed the exam (50%). No students

coded 43 were administered the TAKS Accommodated exam. 4 students were administered the TAKS Modified exam, 2 students failed the exam (50%), 2 students passed the exam (50%).

Students Coded 44

There were forty students coded 44 (<60% of day included), 2 students (5%) administered TAKS, 8 students (20%) administered TAKS Accommodated, and thirty students (75%) administered TAKS Modified. There were a total of 8 students coded 44 who were administered the regular TAKS exam. 6 of the students failed the exam (75%), 2 of the students passed the regular exam (25%). Of the 2 students administered the TAKS Accommodated, 2 students failed the exam (50%), 2 students passed the exam (50%). Of the thirty students administered the TAKS Modified, eleven students failed the exam (36.7%), nineteen students passed the exam (63.3%).

TAKS Reading 2007-2008

The crosstabulation for instructional setting and regular TAKS reading pass/fail rates in the 2007-2008 school year shows a total of thirty-three students administered the TAKS across all settings (40-44). Of the thirty-three students, 7 failed the TAKS exam (21.2%) with twenty-six passing the exam (78.8%). The data shows higher rates of passing for students who spent greater time in the inclusive setting. Students coded as 40 show a passing rate of 95%, those coded 41 show a passing rate of 55.6%, and those coded 42 and 44 show a passing rate of 50%. Data reflecting the instructional setting and regular TAKS pass/fail rates is shown in Table 4.20.

INSERT TABLE 4.20 HERE

TAKS Accommodated Reading 2007-2008

The crosstabulation for instructional setting and TAKS Accommodated reading pass/ fail rates in the 2007-2008 school year shows a total of one hundred twelve students administered the

TAKS Accommodated across all instructional settings (40-44). Of the one hundred twelve students, fifty-three failed the TAKS Accommodated (47.3%), fifty-nine passed the exam (52.7%). For this test, the data shows the students included the greatest amount of time with the highest passing rates. Students coded 40 had a passing rate of 60%, students coded 41 had a passing rate of 54.5%, students coded 42 had a passing rate of 40%, students coded 43 had a passing rate of 50%, those coded 44 had a passing rate of 25%. The 50% passing rate for students coded 43 may be related only 2 students in that category. Data reflecting the instructional setting and TAKS Accommodated reading pass/fail rates is shown in Table 4.21.

INSERT TABLE 4.21 HERE

TAKS Modified Reading 2007-2008

The crosstabulation for instructional setting and TAKS Modified reading pass/fail rates in the 2007-2008 school year show a total of one hundred six students administered the modified exam across all instructional settings (40-44). Of the one hundred six students, seventeen failed the exam (16%), eighty-nine students passed the exam (84%). Students coded 40 and 41 show a passing rate of 100%, students coded 42 passed at 91.1%, students coded 44 passed at 63.3%, and students coded 43 show a passing rate of 50%. The low passing rate of students coded 43 may be attributed to the 2 students in that category. Data reflecting the instructional setting and TAKS Modified reading pass/fail rates is shown in Table 4.22.

INSERT TABLE 4.22 HERE

Logistic Regression for Reading 2007-2008

Instructional Setting (Inclusion)

The logistic regression for reading 2007-2008 shows the overall model is more effective than the null model (intercept-only model with no predictors), $X^2(6) = 54.01, p < .01$. The

Hosmer and Lemeshow Test also shows $X^2(7) = 7.81, p = .35$. The regression equation was tested to determine primarily if the variable of amount of time included predicts passing rates on TAKS. The log odds of passing the TAKS was significantly related to PEIMS 40, 41, and 42 (all p 's $< .01$). Students who are in the category of 40 (100% of day included) are 10.61 times ($= e^{2.36}$) more likely to pass TAKS than those students in a more restrictive category of 44 (<40% of day included). Students in the 41 category (>79% of day included) are 6.11 times ($= e^{1.81}$) more likely to pass TAKS when compared to students in the category of 44 (<40% of day included). Students who are coded 42 (50-60% of day included) are 4.05 times ($= e^{1.4}$) more likely to pass TAKS than students coded 44 (< 40% of day included). Students with a code of 43 (>50% of day included) are 1 times ($= e^{1.27}$) more likely to pass the TAKS than students with a code of 44.

Type of TAKS Test

The type of TAKS test also significantly predicts TAKS passing rates, $p < .01$. In other words, the type of TAKS test a student takes is a strong predictor of passing rates on TAKS reading 2007-2008.

Socioeconomic Status

The data regarding reading passing rates and SES shows significance, $p = .02$. Socioeconomic status is a significant variable in reading passing rates for 2007-2008. The model summary, Hosmer and Lemeshow Test, and reading passing rates and SES are presented in Table 4.23. The regression equation is presented in Table 4.24.

INSERT TABLE 4.23 HERE

INSERT TABLE 4.24 HERE

Correlation Matrix

A correlation matrix demonstrates 1) the correlation between each category of instructional setting, 2) the correlation between SES and instructional setting, and 3) the correlation between amount of time included and type of TAKS test. The correlation between SES and instructional setting of 40 shows no strong correlation to PEIMS 40, $r = .01$. SES and instructional setting 41 show no strong correlation with $r = .01$. SES and PEIMS 42 show no strong correlation, $r = .05$. SES and instructional setting 43 show no strong correlation with $r = .01$. The type of TAKS test shows a strong correlation to PEIMS 40, $r = .61$ with weak correlation to PEIMS 41, $r = .48$; with less correlation to PEIMS 42, $r = .33$, and PEIMS 43, $r = .03$. Overall, the correlation matrix shows no relationship among all categories of instructional setting, strong relationship between instructional setting and type of TAKS test for categories 40 and 41, and no relationship between SES and instructional setting. The correlation matrix is presented in Table 4.25.

INSERT TABLE 4.25 HERE

Correlations for Reading 2007-2008

Correlations among TAKS, TAKS Accommodated, and TAKS Modified 2007-2008 in reading were tested with a Spearman correlation. The regular TAKS exam shows no correlation to the amount of time included in the general education setting, $r = -.48$, $p = .09$. The TAKS Accommodated shows no correlation to the outcome variable, $r = -.19$, $p = .15$. Finally, the TAKS Modified shows no significant correlation to the outcome variable, $r = -.39$, $p = .07$. The results of the Spearman correlation are presented in Table 4.26.

INSERT TABLE 4.26 HERE

The Spearman correlation shows no significant correlation between instructional setting and reading passing rates, $r = -.10$, $p = .12$. The instructional setting shows a significant correlation to the type of TAKS test administered, $r = .46$, $p < .01$. The data indicates a correlation between the passing rate on the reading test and the type of TAKS test administered, $r = .32$, $p < .01$. Overall, for reading 2007-2008, the amount of time a student spends included in the general education setting shows no correlation to the passing rates of students with special needs; however, instructional setting and pass/fail rates are both correlated to the type of TAKS test administered. The results of the Spearman correlation are presented in Table 4.27.

INSERT TABLE 4.27 HERE

Reading 2008-2009

Instructional Setting and Reading

There were a total of ($N=248$) third graders with special needs in the cohort of students administered a TAKS exam across the district in 2008-2009. This number represents all third graders across the district who had a disability code and an instructional setting of 40, 41, 42, 43, or 44.

Students Coded 40

In the 2008-2009 school year there were sixty-seven students coded 40, with thirteen students (19.4%) administered TAKS, thirty-two students (47.8%) administered TAKS Accommodated, and twenty-two students (32.8%) administered TAKS Modified. Of the sixty-seven students with an instructional code of 40, 3 students failed the TAKS exam (23.1%), ten students passed the regular exam (76.9%). Of the thirty-two students administered TAKS Accommodated, eleven students failed the exam (34.4%), twenty-one students passed the exam

(65.6%). There were twenty-two students administered TAKS Modified, of which 4 students failed (18.2%) and eighteen students passed (81.8%).

Students Coded 41

There were one hundred eleven students coded 41, with fourteen students (12.6%) administered TAKS, thirty-two students (28.8%) administered TAKS Accommodated, and sixty-five students (58.6%) administered TAKS Modified. Of the fourteen students administered the regular TAKS, 2 students failed the exam (14.3 %), twelve students passed the exam (85.7%). Of the thirty-two students administered the TAKS Accommodated, nineteen students failed the exam (59.4%), thirteen students passed the accommodated version (40.6%). Of the sixty-five students administered the TAKS Modified, ten students failed the exam (15.4%), fifty-five students passed the modified exam (84.6%).

Students Coded 42

There were thirty-two students coded 42, with no students administered TAKS, 6 students (18.8%) administered TAKS Accommodated, and twenty-six students (81.3%) administered TAKS Modified. Of the 6 students administered the TAKS Accommodated, 4 students failed the exam (66.7%), 2 students passed the exam (33.3%). Of the twenty-six students administered the TAKS Modified, 6 students failed the exam (23.1%), twenty students passed the modified exam (76.9%).

Students Coded 43

There were 8 students coded 43, with no students administered TAKS, 3 students (37.7%) administered TAKS Accommodated, and 5 students (62.5%) administered TAKS Modified. Of the 3 students administered TAKS Accommodated, 1 student failed the exam

(33.3%), 2 students passed the exam (66.7%). Of the 5 students administered TAKS Modified, 1 student failed the exam (20%), 4 students passed the modified exam (80%).

Students Coded 44

There were thirty students coded 44, with no students administered TAKS, 7 students (23.3%) administered TAKS Accommodated, and twenty-three students (76.7%) administered TAKS Modified. Of the 7 students administered TAKS Accommodated, 4 students failed the exam (57.1%), 3 students passed the exam (51.1%). Of the twenty-three students administered the TAKS Modified, ten students failed the exam (43.5%), thirteen students passed the modified exam (56.5%).

TAKS Reading 2008-2009

The crosstabulation of instructional setting and TAKS reading pass/fail rates for 2008-2009 shows a total of twenty-seven students administered the regular TAKS. Of the twenty-seven students in this category, 5 students failed the exam (18.5%), twenty-two students passed the exam (81.5%). Students coded as 40 show a passing rate of 76.9% and students coded 41 show a passing rate of 85.7%. It is interesting to note that the students with less time in the inclusive setting (41) show a higher passing rate than those students who were fully included (40). A crosstabulation showing the instructional setting and regular TAKS reading pass/fail rates is found in Table 4.28.

INSERT TABLE 4.28 HERE

TAKS Accommodated Reading 2008-2009

The crosstabulation of instructional setting and TAKS Accommodated reading pass/fail rates for 2008-2009 shows a total of eighty students administered the TAKS Accommodated exam. Of the eighty students administered TAKS Accommodated, thirty-nine students failed the

exam (48.8%), forty-one students passing the exam (51.1%). Students coded 43 show a passing rate of 66.7%, those coded 40 passed at 65.6%, those coded 44 passed at 42.9%, those coded 41 passed at 40.6%, and students coded 42 show a passing rate of 33.3%. The discrepancy in the passing rates of students coded 43 and 44 when compared to students in the category of 40 and 41 may be attributed to the low number of students in those categories. A crosstabulation reflecting the instructional setting and TAKS Accommodated reading pass/fail rates may be found in Table 4.29.

INSERT TABLE 4.29 HERE

TAKS Modified Reading 2008-2009

The crosstabulation of instructional setting and TAKS Modified reading pass/fail rates for the 2008-2009 school year show a total of one hundred forty-one students administered the TAKS Modified exam. Of the one hundred forty-one students, thirty-one failed the exam (22%), one hundred ten students passing the exam (78%). Students coded 41 show the highest passing rate at 84.6%. Those coded 40 passed at 81.8%, those coded 43 passed at 80%. Those coded 42 passed at 76.9%, and students coded 44 show a passing rate of 56.5%. Students spending greater than 50% of their day included in the general education setting show greater passing rates than those students included less than 50% of the day. A crosstabulation reflecting the instructional setting and TAKS Modified pass/fail rates for 2008-2009 is shown in Table 4.30.

INSERT TABLE 4.30 HERE

Logistic Regression for Reading 2008-2009

Instructional Setting (Inclusion)

The logistic regression for reading 2008-2009 shows the overall model is more effective than the null model (intercept-only model with no predictors), $X^2(6) = 27.09, p < .01$. The

Hosmer and Lemeshow Test also shows $X^2(6) = 5.12, p = .74$. The regression equation was tested to determine primarily if the variable of amount of time included predicts passing rates on TAKS. The log odds of passing the TAKS was significantly related to PEIMS 40 and 41 (all p 's $< .01$). Students who are in the category of 40 (100% of day included) are 2.84 times ($= e^{1.05}$) more likely to pass TAKS than those students in a more restrictive category of 44 (<40% of day included). Students in the 41 category (>79% of day included) are 4.32 times ($= e^{1.46}$) more likely to pass TAKS when compared to students in the category of 44 (<40% of day included). Students who are coded 42 (50-60% of day included) are 1.9 times ($= e^{.64}$) more likely to pass TAKS than students coded 44 (< 40% of day included). Students with a code of 43 (>50% of day included) are 3.9 times ($= e^{1.38}$) more likely to pass the TAKS than students with a code of 44. Overall, PEIMS 40 and 41 are significantly correlated to passing rates while PEIMS 42 and 43 are not.

Type of TAKS Test

The type of TAKS test also significantly predicts TAKS passing rates, $p < .05$. In other words, the type of TAKS test a student takes is a strong predictor of passing rates on TAKS reading 2008-2009.

Socioeconomic Status

The data regarding SES shows no significance, $p = .24$. Socioeconomic status is not a significant variable in reading passing rates 2008-2009. The model summary, Hosmer and Lemeshow Test, and reading passing rates and SES are presented in Table 4.31. The regression equation is presented in Table 4.32.

INSERT TABLE 4.31 HERE

INSERT TABLE 4.32 HERE

Correlation Matrix

A correlation matrix demonstrates 1) the correlation between each category of instructional setting, 2) the correlation between SES and instructional setting, and 3) the correlation between amount of time included and type of TAKS test. The correlation between SES and instructional setting of 40 shows no strong correlation to PEIMS 40, $r = .05$. SES and instructional setting 41 show no strong correlation, $r = .08$. SES and PEIMS 42 show no strong correlation, $r = -.00$. SES and instructional setting 43 show no strong correlation with $r = -.05$. The type of TAKS test shows a weak correlation to PEIMS 40, $r = .34$ with weak correlation to PEIMS 41, $r = .20$; with less correlation to PEIMS 42, $r = .02$, and PEIMS 43, $r = .12$. Overall, the correlation matrix shows no relationship among all categories of instructional setting, with weak relationships between instructional setting and type of TAKS test for all instructional categories and no relationship between SES and instructional setting. The correlation matrix is presented in Table 4.33.

INSERT TABLE 4.33 HERE

Correlations for Reading 2008-2009

Correlations among TAKS, TAKS Accommodated, and TAKS Modified 2008-2009 in reading were tested with a Spearman correlation. The regular TAKS exam shows no correlation to the amount of time included in the general education setting, $r = .11$, $p = .57$. The TAKS Accommodated shows no correlation to the outcome variable, $r = -.20$, $p = .07$. Finally, the TAKS Modified shows no significant correlation to the outcome variable, $r = -.18$, $p = .03$. The results of the Spearman correlation are presented in Table 4.34.

INSERT TABLE 4.34 HERE

The Spearman correlation shows no significant correlation between instructional setting and reading passing rates, $r = -.09, p = .12$. The instructional setting shows a significant correlation to the type of TAKS test administered, $r = < .01, p < .01$. The data indicates a correlation between the passing rate on the reading test and the type of TAKS test administered, $r < .01, p < .01$. Overall for reading 2008-2009, the amount of time a student spent included in the general education setting shows no correlation to the passing rates of students with special needs; however, instructional setting and pass/fail rates are correlated to the type of TAKS test administered. The results of the Spearman correlation are presented in Table 4.35.

INSERT TABLE 4.35 HERE

Reading Versus Mathematics

Passing rates for reading 2007-2008 surpassed passing rates for mathematics in the same year. TAKS reading shows a passing rate of 78.8% with mathematics at 66.7%. TAKS Accommodated reading shows a passing rate of 52.7% with mathematics at 50.9%. TAKS Modified reading shows a passing rate of 84% with mathematics at 67.9% passing. However, the trend reverses in 2008-2009 with mathematics surpassing reading pass rates. TAKS reading shows a passing rate of 81.5% with mathematics at 85%. TAKS Accommodated reading shows a passing rate of 51.1% with mathematics at 63.3%. TAKS Modified reading shows a passing rate of 78% with mathematics at 83.3%. Reading passing rates decreased only slightly from 2007-2008 while mathematics pass rates increased significantly. Data reflecting reading and mathematics passing rates from 2007-2008 and 2008-2009 are shown in Table 4.36.

INSERT TABLE 4.36 HERE

Summary

Mathematics 2007-2008 and 2008-2009

TAKS mathematics passing rates for students with special needs showed significant correlation to the amount of time which students were included in the general education setting. Logistic regression with was chosen to describe and test the hypothesis and to examine the strength of relationship between the categorical outcome variable of TAKS achievement passing rates and the predictor variable of amount of time in the inclusive classroom.

The Spearman Correlation showed strong correlation between amount of time included in the general education classroom (Instructional Setting PEIMS) and passing rates for TAKS mathematics 2007-2008, $r = -.16, p = .01$; mathematics 2008-2009, $r = -.15, p = .02$. There was also a strong correlation between amount of time included and type of TAKS test on mathematics 2007-2008, $r = .49, p < .01$; mathematics 2008-2009, $r = .32, p < .01$.

Logistic regression and the Hosmer and Lemeshow Test demonstrated strong correlation between the predictor variable of amount of time in the inclusive setting and passing rates on TAKS mathematics 2007-2008, $p < .01$; mathematics 2008-2009, $p < .01$. The regression equation showed significance between the amount of time included and passing scores on TAKS mathematics 2007-2008 and 2008-2009, $p < .01$. Additionally, odds ratios for passing TAKS increased with increasing amounts of time in the general education setting.

Correlation matrices showed strong correlation among all instructional categories and correlation between amount of time included and type of test for PEIMS 40 and 41 for mathematics 2007-2008. Correlation matrices for mathematics 2008-2009 showed little correlation between amount of time included and type of test for all instructional categories (40-44).

Crosstabulations examining the relationship between the amount of time included in the general education setting and passing rates on TAKS mathematics showed higher passing rates than failing rates across all instructional settings for students with special needs on TAKS mathematics in both years of the study. Crosstabulations for mathematics 2007-2008 showed that all students with special needs administered the regular TAKS were coded 40, 41, and 42 with a passing rate of 66.7%; students with PEIMS 40, 41, 42, and 42 were administered TAKS Accommodated with a passing rate of 50.9%; students with an instructional coding of 40, 41, 42, 43, and 44 were administered TAKS Modified with a passing rate of 67.9%. Crosstabulations for mathematics 2008-2009 showed student with special needs across all instructional settings (40-44) administered the regular TAKS with a passing rate of 100%; students administered TAKS Accommodated across all instructional settings with a passing rate of 63.3%; students administered TAKS Modified across all instructional settings with a passing rate of 83.3%.

Overall, students included the greatest amount of time each day (40, 41, and 42) showed greater passing rates on every type of TAKS test administered for mathematics in both years of the study, in spite of the results of the logistic regression indicating no correlation between instructional setting and passing rates on the various exams. While the statistical regression indicated no correlation, the data on passing rates by instructional setting and test type showed increased passing rates for those students included more than fifty percent of their school day. Certainly, the type of TAKS test which a student was administered was a strong predictor of passing the test. Statistics run for the effect of socioeconomic status determined there was no significant correlation between SES and any instructional setting for mathematics 2007-2008, $p = .10$; mathematics 2008-2009, $p = .21$. In addition, Spearman correlations showed no

correlation between mathematics passing rates and SES, $p = .52$ in 2007-2008 and $p = .34$ in 2008-2009.

Overall, the crosstabulations run showed that increased passing rates on TAKS mathematics correspond with increased amounts of time in the inclusive setting, with the exception of TAKS Accommodated in 2007-2008. The data definitively showed that students included for more than fifty percent of the day (LRE 40, 41, and 42) demonstrated higher passing rates on all TAKS tests. Data summarizing mathematics 2007-2008 and 2008-2009 is reflected in Table 4.37.

INSERT TABLE 4.37 HERE

Reading 2007-2008 and 2008-2009

TAKS reading passing rates for students with special needs showed no correlation to the amount of time included in the general education setting for those students spending less than fifty percent of their day included (PEIMS 43 and 44). However, for those students coded 40, 41, and 42 (greater than fifty percent of day included), the data for reading looks similar to the data for mathematics. Logistic regression was chosen to describe and test the hypothesis and to examine the strength of relationship between the categorical outcome variable of TAKS achievement passing rates and the predictor variable of amount of time in the inclusive classroom.

The Spearman Correlation showed no correlation between amount of time included in the general education classroom (Instructional Setting PEIMS) and passing rates for TAKS reading 2007-2008, $r = -.10$, $p = .12$; reading 2008-2009, $r = -.10$, $p = .13$. There was a strong correlation between amount of time included and type of TAKS test on reading 2007-2008, $r = .46$, $p < .01$; reading 2008-2009, $r = .29$, $p < .01$. Logistic regression and the Hosmer and Lemeshow Test

demonstrated a good fit between the predictor variable of amount of time included and passing rates on TAKS reading 2007-2008, $p < .01$; reading 2008-2009, $p < .01$. The regression equation showed significance between amount of time included and passing rates on TAKS reading 2007-2008, $p = <.05$ for PEIMS categories 40, 41, and 42; reading 2008-2009, $p = <.05$ for PEIMS 40 and 41 with PEIMS 42 and 43 showing no significance to passing rates, $p = > .05$.

Correlation matrices showed no correlation among PEIMS categories with strong correlation between amount of time included and type of test for PEIMS 40 and 41 for reading 2007-2008, as well as strong correlation between PEIMS 40 and 41 and type of TAKS test. Correlations for reading 2008-2009 showed no correlation among PEIMS categories with a weak relationship between amount of time included and type of TAKS test.

Crosstabulations examining the relationship between amount of time included in the general education setting and passing rates on TAKS reading showed higher passing rates than failing rates across all instructional settings for students with special needs on TAKS reading in both years of the study. Crosstabulations for reading 2007-2008 showed that all students with special needs administered the regular TAKS were coded 40, 41, 42, and 44 with a passing rate of 78.8%; students coded 40-44 were administered TAKS Accommodated with a passing rate of 52.7%; students coded 40, 41, 42, 43, and 44 were administered TAKS Modified with a passing rate of 84%. Crosstabulations for reading 2008-2009 showed students with special needs across all instructional settings (40-44) administered the regular TAKS with a passing rate of 81.5%; students administered TAKS Accommodated across all instructional settings with a passing rate of 51.1%; students administered TAKS Modified across all instructional settings with a passing rate of 78%. Overall, with few exceptions, the crosstabulations run showed that increased passing rates correlate with increased amounts of time in the general education setting, and

students included for more than fifty percent of the day had higher passing rates than students included less than fifty percent of the day, in other words, students coded 40,41, and 42 showed increased rates of passing with increased amounts of time included in the general education class.

Statistics tabulated for the effect of socioeconomic status determined that there was no significant correlation between SES and instructional setting 2007-2008, $p = .08$; reading 2008-2009, $p = .23$. Spearman correlations for reading and SES showed a significant correlation between SES and reading passing rates for 2007-2008 with $p = .02$. However, the data showed no significant correlation between reading passing rates and SES in 2008-2009, $p = .24$.

It is most interesting to note that the statistical analyses for reading showed no correlation between the amount of time a student is included in the general education classroom and passing rates on the TAKS reading exam. However, crosstabulations of passing rates by exam indicated that students spending greater than fifty percent of their day included had higher passing rates than those students included for less than fifty percent of the day. With few exceptions, within each instructional category, greater amounts of time included in the general education setting correspond with greater passing rates on the TAKS exam; students administered the TAKS Modified exam in both years appear to have no consistent passing pattern as relates to inclusion. Although the logistic regression indicated no correlation between time included and passing rates on TAKS, crosstabulations indicated that increased time included in the general education setting corresponds with increasing passing rates on the TAKS exam. Data summarizing reading 2007-2008 and 2008-2009 is reflected in Table 4.38.

INSERT TABLE 4.38 HERE

Chapter 5

Interpretation of Results

Research now shows that a child who doesn't learn the reading basics early is unlikely to learn them at all. Any child who doesn't learn to read early and well will not easily master other skills and knowledge, and is unlikely to every flourish in school or in life. (American Federation of Teachers, 1999, p. 5)

Research Results

This research study focuses upon the relationship between the amount of time a student with special needs spends included in the general education classroom and the TAKS achievement passing rates of this cohort of students in 2007-2008 and in 2008-2009. Achievement test data in mathematics and reading from all third grade students across the Northern Pass Independent School District was analyzed in 2007-2008 and in their fourth grade year 2008-2009.

SES and Passing Rates for Mathematics and Reading

Current research in the area of student achievement and socioeconomic status highlights the correlation between socioeconomic status and student achievement in mathematics and reading (Popham, 2003). Interestingly, this study found no correlation between the socioeconomic status and mathematics passing rates for students with special needs. For those students with an instructional setting of 40, 41, 42, and 43, socioeconomic status was not related to passing rates on TAKS mathematics in 2007-2008 or 2008-2009. For reading, SES was correlated to passing rates in 2007-2008, but was not correlated to reading pass rates in 2008-2009. Further research which examines students of low SES with special needs should focus upon specific disability and the effects of disability upon achievement. It is this researcher's

belief that the effects of disability overshadow the effects of SES. It is also possible that the choice of appropriate testing measures reduces the negative effects of SES upon achievement results.

Mathematics Passing Rates and Inclusion

Logistic regression showed a strong correlation between amount of time included and mathematic passing rates for students with special needs in both years of the study. Correlations and crosstabulations for all tests (TAKS, TAKS Accommodated, and TAKS Modified) with amount of time included showed that students who spend greater than fifty percent of the day included have higher passing rates than students who spend less than fifty percent of the day with their general education peers. Conversely, logistic regression analyzing reading and amount of time included showed no correlation for those students included for less than fifty percent of the day, and correlation for those students included for more than half of each school day. Yet, correlations and crosstabulations of reading tests (TAKS, TAKS Accommodated, and TAKS Modified) with amount of time included showed higher passing rates on the reading exam for students who spend more than fifty percent of their instructional day included.

The findings of this study note that mathematics passing rates on standardized achievement tests were highly correlated to the amount of time a student with special needs spent in the general education classroom, while reading passing rates were correlated with amount of time included for those students who spent more than half of their day in the general education classroom. Almost without exception, any student included for more than fifty percent of the school day showed higher passing rates in both mathematics and reading than those students included for less than fifty percent of the day. While regression analyses indicated little correlation between inclusion and reading pass rates, it is clear that students who were included

for at least half of the school day performed better in mathematics and reading than students who spent most of their day in a self-contained special education setting. Passing rates for students with special needs remain lower than passing rates for typically developing students, and thus, current legislative efforts which call for accountability to higher standards of expectation and mastery of learning for students with special needs remain imperative to change.

Current research in the area of mathematics and reading achievement for students with special needs supports the findings of this research study; and that acquisition of mathematics skills for students with special needs is better understood and better taught by teachers (Helwig, Anderson, & Tindal, 2002) than the more complex acquisition of reading skill.

Recommendations for Practice

This chapter will address numerous recommendations for systemic change and instructional practice which extend the findings of the study. The results of this research study and its implications upon the special education programming policies in Northern Pass Independent School District are best advocated through the following measures:

- ☞ Mathematics instruction which is engaging, hands-on, and focuses upon the sequential skills necessary for the development of mathematical ability.
- ☞ Reading programming based upon the development of phonological decoding skills with the added components of fluency and comprehension.
- ☞ Special education evaluation processes which are culturally responsive and seek to address overrepresentation.
- ☞ The development of inclusive identities in schools and teachers which support and accept diversity in students through continued staff development and support for the needs of diverse learners.

- ☞ The development of sociocultural norms addressing individual need without segregating or classifying students; the development of a mindset which eliminates cultural deficit theory.
- ☞ A continued focus upon disproportionality at the state and local levels.
- ☞ The creation of culturally responsive systems which develop schools, teachers, instruction and assessment to meet the needs of a diverse community of learners.
- ☞ Advocacy for policy reform which supports multiple measures of assessment, culturally responsive systems, and the full development of any student in our schools.

Recommendations for practical applications of the findings of this research are vital to reform efforts at every level. The recommendations made by this researcher are discussed at length with support from current research in the field.

Mathematics and Special Needs

Mathematics and Achievement

The research study noted strong correlation between amount of time included and mathematics achievement passing rates for students with special needs. Research in the field of mathematics achievement and students with special needs supports the concept that mathematical skill is hierarchical, with each piece of knowledge serving as the foundation for the next concept. Bottge, Rueda, Serlin, Hung, and Kwon (2007) note the differential in test scores between typically developing students and students with special needs. Bottge, et al. discovered more than one-fourth of typically developing students score below basic performance levels; and additionally, two-thirds of students with special needs perform below basic performance levels. They contend that high expectations and low performance on mathematics exams by students with special needs have led educators to examine the effectiveness of traditional teaching

practices and strategies in meeting the instructional performance needs of diverse learners.

Browder, Gibbs, Ahlgrim-Dezell, Courtade, Mraz, and Flowers (2009) point to cultural expectations in recent years as the foundation for higher expectations regarding the performance of student with special needs. Bottge, et al. support the use of active, engaging lessons in which students have a hands-on experience.

Rodd (2006) researched the behaviors necessary for students to possess in order to be successful in mathematics. She determined through her studies that students with special needs often lack the requisite social or emotional skills to successfully navigate school. In particular, Rodd notes the importance of a student's ability to self-regulate their emotions or behavior which can have a devastating effect on their ability to focus on mastery of content. In addition, she notes the importance of student motivation and the teacher's role in providing well planned lessons which engage each student. Teachers must be cognizant of engaging students with special needs through the affective domain while providing access to instruction for students with disabilities. Rodd(2007) insists the human brain is wired for mathematics and numerosity.

Helwig, Anderson, and Tindal (2002) remind educators that students develop mathematical abilities through continual exposure and contextual understanding to those concepts and skills which are organized in schema. Mathematical knowledge is hierarchical and must be developed over time, and within context, for students to fully comprehend and master skills. The development of mathematics ability is much more hierarchical than the development of reading skill.

Reading and Special Needs

Reading and Achievement

It seems clear that phonological coding ability is the primary determinant of the child's success in mastering the alphabetic code and in learning to attach names to printed words as wholes and that he or she must acquire facility in both subskills to learn to read.

(Vellutino, et al., 1996, p. 631)

Research in the field of reading difficulties and disabilities demonstrate that more than eighty percent of students receiving special education services have an identified reading disability (Shaywitz, 2003; Mariage, Burgener, Wolbers, Shanklan, Washburn-Moses, Dimling, Kosobud, & Peters, 2009). Among children with disabilities, it has been noted that children experience the most difficulty with reading and learning to read (Martin, Martin, & Carvalho, 2008). The United States Department of Education reported in 2002 that of the 2,887,217 school-aged students receiving special education services for identified learning disabilities, the vast majority of these children had developmental delays in reading which led to the identification of a learning disability.

While more than eighty percent of students with special needs also have an identified reading disability, scientists now believe that ninety-five percent of all children can be taught to read. In spite of encouraging statistics in favor of children learning to read, the alarming numbers of struggling readers is not limited to racial class or socioeconomic status; its prevalence crosses all race and class lines. Heward (2009) notes studies of magnetic resonance imaging of the brains of students with disabilities which indicate activation patterns during phonological processing which differ from students without reading disabilities. However, research in the field of reading contends the chasm between poor readers and fluent readers is one which may be bridged

through organized systematic teaching of reading by a knowledgeable teacher through well designed, purposeful instruction tailored to the needs of every reader in the classroom (AFT, 1999).

Well-Designed Instruction

Well designed instruction based upon data-driven decision making is comprised of practices which are well supported through research on how the brain develops and acquires reading skill. According to the American Federation of Teachers (1999), the following are components essential to well designed reading instruction:

- Direct instruction in decoding, comprehension, and literature.
- Phonemic awareness.
- Systematic and explicit instruction in phoneme segmentation and letter-sound association.
- Vocabulary development which teaches word structure, origins, and meanings.
- Daily exposure to written texts in a variety of genre.
- Explicit instruction in comprehension strategies.

Direct, Systematic, and Explicit

As they begin to learn, poor readers are not less intelligent or less motivated; they are, however, less skilled with language, especially at the level of elemental linguistic units smaller than whole words. (American Federation of Teachers, 1999, p. 16)

Learning to read is an intricate and complex linguistic attainment for which the teaching of reading requires tremendous knowledge and skill acquired through study, time, and

experience (AFT, 1999). Research conducted by experts in the field of reading disabilities underscores the irreplaceable effects of instruction which is direct, systematic, and explicit in the deciphering of words and print (AFT, 1999). Students who are skilled at reading perform the task so automatically that it is difficult for the average teacher to ascertain the underlying processes of precisely how a child makes sense of words and print. The analysis of language and words down to the fundamental level of phonemes (single letter sounds) and morphemes (meaningful parts) is often misunderstood by teachers of reading (AFT, 1999).

Vellutino, et al. (1996) and, more currently, Otaiba and Fuchs (2006) illustrate the tasks requisite for learning to read, and inferentially, extinguishing reading disabilities. They support researchers in the field of dyslexia and reading disorders in their assertion that reading disability is largely caused by phonological coding deficits which restrict or prevent the acquisition of phonological skills. An emphasis upon phoneme segmentation, letter and word familiarity, letter-sound association, word retrieval, and verbal memory skills provides the foundation for reading skills in children. They support a curriculum which focuses upon phoneme segmentation and letter-sound association which allows children to identify words and improve spelling skills. Additionally, they note the equal importance of visual memory ability and skill in the retrieval of words. Swanson, Howard, and Saez (2006) found in their studies that children with reading disabilities frequently have difficulty with working memory and struggle retrieving from memory. Early interventions focusing upon alphabetic awareness and phonological skills can greatly reduce the number of children identified with reading disabilities (Otaiba & Fuchs, 2006; Vellutino, et al., 1996, Shaywitz, 2003; American Federation of Teachers, 1999; Mariage, et al., 2009).

Longitudinal studies conducted with proficient readers reveal that students who read well in middle and high school had early instruction in phonological awareness, word structure and meaning, as well as context driven print (AFT, 1999). Martin, et al. (2008) and Browder, et al. (2009) stress the importance of reading instruction which is early, focused, and provides remediation in the areas of phonemic awareness, decoding, fluency, and comprehension. They support the use of child centered approaches which provide explicit and direct instruction focusing on specific and sequential skills as well as modeling, guidance, and instructional support for students throughout the reading process. Current research in the field of reading recommends the use of high interest literature which is read repeatedly over time to gain increased levels of comprehension with each reading (Browder, et al., 2009). They further note intensive remediation over time by teachers well trained in reading instruction may be necessary to assist students in acquiring and maintaining reading fluency and comprehension.

Professional development and training of teachers in specific reading instruction which focuses on phonemic awareness, vocabulary development, decoding, fluency, and comprehension provides the framework for reading instruction which is targeted at preventing and eliminating reading disabilities in children (Fuchs, et al., 2010; O' Connor, et al., 2005). O'Connor et al. note the importance of modeling intended reading instruction for teachers in staff development sessions in order to best facilitate the types of behaviors teachers should demonstrate with students throughout the instructional process. Mariage et al., (2009) iterate the importance of professional development which includes teacher planning and collaboration, increased teaching time, and a focus on alignment to state and local curriculum standards as requisite components in the improvement of teaching in any literacy program.

Identification and Intervention

Evaluation of Reading Disability

Vellutino et al. (1996) provide data to support the assertion that evaluation instruments used for the identification and placement of children into special education programs rely heavily upon intelligence testing which fails to focus upon the presence of phonological skills. Such emphasis upon intelligence and discrepancy models of evaluation fails to pinpoint the basis for reading difficulties which may well be lack of appropriate instruction in reading.

Otaiba and Fuchs (2006) contend that improving reading deficiencies is increasingly problematic after the third grade. Their studies focus on response to intervention models which use scientifically based instruction in an intensive format within the general education classroom. Well designed instruction in the general education classroom followed by small group intensive instruction is essential to improving student phonological and decoding issues (O'Connor, Fulmer, Harty, & Bell, 2005).

Otaiba and Fuchs (2006) note that evaluation and identification for special education services often occur after the third grade when the knowledge gap has widened for children, therefore, early and intense intervention should take place in the general education classroom through multi-level tiers of instruction and remediation. Fuchs, Fuchs, and Compton (2010) are supportive of response to intervention models as early as kindergarten to, not only remediate reading difficulties, but to prevent the need for special education services.

An issue of concern for educational diagnosticians who evaluate children for the presence of disabling conditions is sorting out underlying causes for reading disabilities. Vellutino, Scanlon, Sipay, Small, Chen, Pratt, and Denckla (1996) underscore the value of distinguishing between inadequate pre-reading experiences and instruction and the effects of inherent cognitive

deficits in children. Vellutino, et al., note the majority of impaired readers are capable of attaining grade level reading skills if provided early and focused interventions addressing their reading difficulties. The presence of neuro-developmental anomalies accounts for atypical reading difficulties which may be linked to reading disability. Mariage, et al. (2009) focus upon the assessment piece, and the need for all evaluation and support structures to be well aligned and coherent when developing instructional programming and interventions for students with reading difficulties.

Researching Special Education and Reading Achievement

One consistent problem when choosing appropriate instruction for children with learning disabilities is that no general approach can be recommended for all students. Although the children classified as learning disabled are the largest single category of students receiving special education services, one program cannot 'fix' all. (Martin, Martin, & Carvalho, 2008, p.115)

Jimerson, Egeland, and Teo (1999) conducted a longitudinal study of high risk students and the impact which special education and socioeconomic status have upon the reading achievement of students with special needs. They determined that achievement is influenced by many factors over time and note that prior studies of students with special needs have found that special education services have made little impact upon student achievement. However, it is their assertion that special education services should produce achievement trajectories similar to those of typically developing students.

Jimerson, et al. (1999) underscore the importance of several factors upon student achievement; home environment, parent involvement, socioeconomic status, educational interventions, and the influence of special education. Their study found the number of years

which an early elementary student spent in special education significantly predicted lower levels of reading achievement while fewer years in special education predicted higher levels of reading achievement. They also found that SES impacts a student's achievement throughout their entire school career. Their study determined that home environment provided an early foundation for learning which continued throughout the school years. The number of years in special education had a negative impact upon student achievement in reading with the assertion that instruction in the special education setting may be less rigorous than instruction in the general education classroom (Jimerson, et al., Fuchs, Fuchs, & Compton, 2010).

The inclusion of students with special needs has been largely impacted by legislative efforts such as No Child Left Behind (Yell, Shriner, & Katsiyannis, 2006) which requires that schools be held accountable to grade level standards for students with special needs. The extensive and rich history of special education has demonstrated a change in social perspectives witnessed through legislative reform efforts which support fundamental considerations of equity and diversity.

Fundamental Considerations

Equity and Diversity

We can pass laws. We can move children out of segregated classrooms and into general education classrooms. We can even place two teachers in a classroom. Inclusion does not happen as a result of structural changes. It happens when a shift takes place in the way teachers think about diversity in the classroom. (Valle & Conner, 2001. p. 56)

Valle and Connor (2011) iterate the democratic view of the inclusion of all members of society; schools and classrooms in which we embrace the academic and developmental needs of all children. The inclusive classroom becomes one in which everyone benefits, where children

develop friendships, and where collaboration replaces competition. It is a classroom which mirrors society's appreciation for the diversity of each and every one of its individuals. They further argue that the acceptance of disability as a natural human variation is fundamental to the provision of inclusion within society and within our schools today. Gorski (2008) argues that the socioeconomic gap can be eliminated if we demand the best education for every single student, and when society rejects cultural deficit explanations for achievement gaps among subpopulations of students.

The inclusion of students with special needs has increased considerably in the past ten years (Cook, Cameron, & Tankersley, 2007). While general education teachers report positive attitudes about the ideology of inclusion, the actual impact of inclusion is uncertain. Cook, et al. suggest that general education teachers fail to provide the accommodations and supports which a student with special needs requires to be successful. They also indicate teachers do not implement instructional strategies which encourage positive outcomes for their diverse students. Skiba, et al.(2008) allude to the value of culturally responsive practices through intervention, instruction, and referral processes as instrumental in reducing differentials in learning among diverse students. Clarkson (2008) further refines cultural responsiveness of schools and teachers as vital to the improved academic achievement of diverse students.

The journey of society from mainstreaming, where children were placed into general classrooms with the hope of integration, to inclusion of children has occurred in the past twenty years (Nai-Kwai Lo, 2007). Such a defining view of inclusion advocates for a society which regards all students as contributing members of equal value, who are accepted and who have sense of belonging in the school. Nai-Kwai Lo emphasizes the diverse interests, abilities, and

achievements as resources which enrich the classroom environment. The variety of differing attainments and aptitudes provides the threads of a tapestry of diversity in which all are included.

Inclusive Practice

The design and implementation of inclusive environments requires structural change, teacher commitment, and the development of a community of educators who nurture diversity and develop instructional systems which meet the needs of a diverse community of learners. Churton, Cranston-Gingras and Blair (1998) provided principles for inclusion of diverse learners which Valle and Conner (2011) support yet today:

- All children can learn and teachers must understand the teaching-learning process.
- The learning of students is influenced by environment.
- Hands-on experiential learning works for children.
- Diversity among students should be welcomed and encouraged.
- Cooperative learning assists diverse learners.
- Successful teaching encourages independent learners.
- Student centered instruction should focus on the strengths of learners.
- Instruction should be well planned and based upon individual needs.
- Appropriate classroom management creates an atmosphere conducive to learning.
- What type of professional development is offered for teachers, and how are they made aware of the opportunities?
- Do teachers visit model inclusive classrooms?
- Do parents have the opportunity to attend sessions tailored to their needs?
- Are paraprofessionals included in professional development opportunities offered to teachers?

- Are we providing more time for students to be included with their age peers and exposed to higher quality instruction?

Schools today are diverse learning communities which should embrace many cultures, family backgrounds, and learning abilities. Teachers must be flexible in providing instructional opportunities which use student strengths to develop knowledge and skill. Every child is different, and teachers must know and understand the diversity which exists intellectually, behaviorally, and emotionally among and between students (Churton, Cranston-Gingras, & Blair, 1998). The inclusion of family members as stakeholders in decision-making of their children with special needs is identified as vital to closing the achievement gap for children of diversity (Darling, 2008).

Measuring Inclusive Progress

In addition to the measurement of student achievement, Valle and Conner (2011) suggest a focus upon campus level outcomes through examination of the following:

- How is disability spoken of in schools? What kinds of language and attitudes are visible among teachers, students, parents, and administrators when disability is discussed?
- What opportunities are provided for diverse students to interact?
- How often do teachers collaborate in lesson planning, and do lessons reflect differentiation of instruction?

Sociocultural Considerations

However, since the business of education is necessarily shot through with social, political, and ethical questions, the technical dilemmas inevitably interact with other kinds of dilemma: some ways of teaching, grouping or resourcing may be technically effective but carry with them overtones of discrimination, stigmatization or

marginalization; particular forms of practice may disadvantage some students vis-à-vis others; culturally-valued forms of knowledge may conflict with students' own cultural values; and so on. These dilemmas take many forms, but they all arise from the fundamental contradiction of an education system which is at one and the same time based on what students have-or are expected to have- in common and on the differences between each individual. (Dyson & Millward, 2000, as cited in Nilholm, 2006, p. 434)

The duality of social influences upon the educational system with an inherent tendency to categorize groups by commonalities while simultaneously responding to individual differences provides for the dilemmas which Nilholm (2006) describes. His discourse provides insight into the processes necessary for systemic change regarding the inclusion of students with special needs. Nilholm supports and substantiates the notion of inclusive decision-making at the campus level where stakeholders, such as teachers and administrators, determine why inclusion is important as a democratic principle, and how they might accomplish inclusion through the diversity found among themselves as educators.

The conception and incorporation of cultural diversity as an educational resource provides the conceptual framework for genuinely inclusive education. Shuaib (2001) notes the subordinate position which cultural diversity has traditionally taken in the educational institution. The recognition of cultural differences, rather than cultural deficits, generates the understanding that it is differences in culture which contribute to differences in learning patterns and behaviors (Shuaib). All populations, then, are subject to comparison to the mainstream norm, and thus found deficient. The work of Bronfenbrenner (2005) and social cognition supports and enhances the socio cultural approach to teaching a diverse population of students, particularly those identified as disabled when compared to the normative mainstream.

Special education is typically viewed as a response to children's defined deficits (Nilholm, 2006). Through the medical model, and assignment to programming based upon disability category, special education has come under attack with the implementation of inclusive environments as a notion of democracy for the disabled. While deficit theory locates disability within the child, a more interactive approach, such as Bronfenbrenner's social ecology model (2005) define disability through external environmental factors which interact with the child, and which may be changed to meet the needs of the child through systems which are sensitive to the diverse social and cultural ecologies of students. Examination of the current educational systems and the implications of interacting factors such as disproportionality, socioeconomic status, as well as gender, race, and ethnic bias provide the framework for systemic change.

Disproportionality

The overrepresentation of students of linguistic, cultural, gender, or ethnic differences in special education programs is the hallmark of disproportionality (Fiedler, et al., 2008). The consideration of disproportionality of minority students in special education remains an enduring issue in education today (Skiba, et al., 2008; Artiles & Bal, 2008; Fiedler, et al., 2008; Conner & Boskin, 2001). These researchers claim that poverty appears to influence achievement more than race, and conclude numerous poverty- related factors predict academic and behavioral gaps which lead to referral for special education services. Skiba, et al. draw the link between poverty related risks, such as the biological or social effects of poverty and the fact that students of poverty generally attend schools with fewer opportunities and lower quality of instruction than students of higher socioeconomic status. Coutinho, Oswald, and Best (2002) argue that disproportionality occurs as a result of cultural biases that target minority students for special services.

Over representation of minority students in special education has been an issue for at least four decades (Hoover, 2009). The failure of educators to distinguish between diversity and special needs has led to special education placement of students of cultural and linguistic diversity. Hoover points to several practices which inhibit cultural diversity and lead to over identification in special programs:

- 🌐 Teacher preparation programs do not adequately prepare educators for culturally diverse students. Students preparing to become educators should broaden their knowledge for working with diverse learners and choose projects which will prepare them more fully for the variety of learners and learning styles in the classroom.
- 🌐 Teachers fail to use culturally responsive teaching practices in the classroom. Teachers should use the students' cultural backgrounds in developing lessons reflecting the diversity found among the students.
- 🌐 Language differences are frequently misidentified as reading disabilities. Learning differences are often viewed as learning problems rather than typical developmental stages for English language learners.
- 🌐 Culture related behavior is often considered a behavior problem and referred for special services. Students may maintain their own cultural behaviors while adopting typical behaviors of their classmates; thus providing an opportunity for the teacher to understand the cultural context from which the behavior derives.
- 🌐 Teachers do not match their teaching style to student need. Cultural and linguistic values influence a student's approach to learning requiring teacher knowledge of strategies to employ for meeting diverse learning needs.

- 🌐 Lack of cultural competence on the part of the teacher. Teachers must understand how their own culture affects their teaching, and their students' learning, and must adopt teaching behaviors which reflect understanding of their students' cultural, linguistic, and learning needs.
- 🌐 Adequate opportunities to learn through culturally responsive lessons. Appropriate lesson planning, materials, intervention opportunities, individualized assessment, and classroom management must each reflect the diverse needs of the students.
- 🌐 Biased assessment which reflects little diversity contributes to confusion between learning differences and learning disabilities.

Research supports the notion that greater opportunities for learning provide greater achievement gains for students (Skiba, et al., 2008). A definitive lack of access to quality instruction for learners with special needs was noted in research conducted by Kozol in 2005 and Peske and Haycock in 2006 (as cited in Skiba, et al) with inequities found in both the quantity and quality of instructional resources provided to students with special needs. Skiba, et al., note numerous factors which lead to the referral of minority students for special services:

- 📖 Teachers feel that they have insufficient resources to work with students with different needs.
- 📖 Cultural gaps contribute to teacher ineffectiveness in working with students with diverse behaviors.
- 📖 Pre-referral intervention teams (RtI) were viewed positively, however the impact of this process upon instruction was inconsistent.
- 📖 Teachers tend to refer students for special education as the sole resource.

The concept of disproportionality tends to be multi-dimensional and requires that schools and districts carefully examine attitudes, policies, and practices which contribute to the overrepresentation of minorities in special education (Skiba, et al., 2008). Strategies for reducing overrepresentation, or disproportionality, in special education are suggested by Skiba, et al. (2008) and Fiedler, et al. (2008):

- ☞ Data regarding disproportionality must be studied by school personnel.
- ☞ Assessment and intervention should be culturally responsive.
- ☞ Culturally and linguistically instructional practices must be developed in teachers.
- ☞ Mandated use of culturally and linguistically responsive instruction in all schools.
- ☞ Response to intervention models which embed culturally responsive instruction.
- ☞ Instructional collaboration must occur between special educators and general educators.
- ☞ The instructional team includes the parent in decision making regarding their child.
- ☞ The special education referral process should embed culturally responsive practices.

Social Constructs of Difference

Issues of equity and access hinge upon separating those differing from the norm (Artiles & Bal, 2008). In response to dilemmas of difference, models of special education were created, and in recent decades, the overrepresentation of diverse students receiving special education services has been noted as well. The dilemma created by social constructs of difference inherently cause disharmony between what is considered by society to be normal and that which does not fall within the parameters of normal. Artiles and Bal provide focus on this nebulous social construct:

1. Difference is associated with stigma.

2. Disproportionality in special education indicates oppressive attitudes and perceptions of diverse students.
3. Difference is a socially defined construct, and can, therefore, be re-defined.
4. Difference is considered intrinsic rather than externally defined.
5. Cultural perspectives define difference.
6. Structural inequities are embedded in the educational system.
7. Social ideologies support white middle class individuals will punishing cultures which do not conform to this model.

Rothstein and Trumbull (2008) support a sociocultural constructivist approach to schooling which supports culturally relevant schools and classrooms through an understanding of the following:

1. Student learning occurs through the lens of their own social and cultural contexts.
2. The social and cultural practices in the home influence student actions.
3. Good teachers utilize existing skills in students while developing new ones.
4. Students learn to take responsibility for their learning over time.

Rothstein-Fisch and Trumbull (2008) contend the differences among how people fit into cultural systems are defined by individualism and collectivism. They note that seventy percent of world cultures demonstrate collectivist values while the United States and Western Europe show individualistic values. Teachers and administrators approach students through their own individualistic or collectivistic values and develop classroom and school environments which may, or may not reflect the diversity of students they serve. Children from collectivist homes are taught to work toward group goals rather than individual goals, while children from

individualistic homes are taught the importance of competition and obtaining individual recognition and goals.

Construction of difference is determined by the dominant culture, and is expressed cogently by Minow (as cited in Artiles & Bal, 2008): “Difference is a comparative construct: different from what or whom?” (p. 5). Cultural deficit discourse supports the definition of difference through race, class, and gender identities (Lareau, 2006). While the creation of special programs for students with different needs has been a result of legislative reform of the past forty years, the practice itself creates a dilemma for school systems in perpetuating difference rather than accepting and honoring diversity among individuals in society.

Implications for Change

Researchers in the field of disproportionality, inclusion, and culturally responsive teaching support reform initiatives which address multiple practices promising to reach far into the future of diverse learners (Coutinho & Oswald, 2005). Such practices promise to address educational issues of equity and diversity.

Legislation

Legislative efforts such as No Child Left Behind in 2001, IDEIA in 2004, and Elementary and Secondary Education Act in 2010 focus on the full participation of students with special needs in the general curriculum through instruction, assessment, and accountability to state curriculum standards and the provision of inclusive environments (Yell, et al., 2006; Coutinho & Oswald, 2005). Advocates for culturally responsive schools and culturally responsive teaching practices support the passage of legislative mandates which require the implementation of culturally responsive practices in classrooms today (Skiba, et al., 2008).

Technical Assistance

Data collection on gender, race, and ethnic disproportionality in special education is crucial to increasing the achievement of culturally diverse students with special needs (Coutinho & Oswald, 2005; Clarkson, 2008; Skiba, et al., 2008). Numerous factors contributing to the overrepresentation of minorities and males in special education may include sociocultural attitudes, educator bias in the referral process, and the tendency to identify more males than females with disabling conditions, as well as more minorities than whites with disability. Pre-referral and eligibility procedures should be examined with regard to overrepresentation, and procedures should be put into place which simultaneously address and decrease disproportionality in special education services (Coutinho & Oswald, 2005). School personnel should be included in the disaggregation of data on disproportionality in order to provide a foundation of data-driven decision making in determining prescribed interventions which adhere to culturally responsive reform measures ensuring the perspectives of all stakeholders in the interpretation of data and the formulation of intervention strategies (Skiba, et al., 2002; Skiba, et al., 2008).

Educational Opportunity

The examination of disproportionality data at the state, district, and campus level and the identification of bias or inequity are precursors to the provision of educational opportunities for diverse learners (Skiba, et al. 2002). Recommendations made by Skiba, et al. include: 1) tracking data on the numbers of students with special needs in lower level courses, 2) curriculum which reflects the history and culture of diverse students, 3) attention to the quality of instruction in remedial and compensatory classes, 4) equitable use of resources across socioeconomic groups within the school, and 5) use of culturally competent assessment.

Culturally Competent Assessment

It is suggested by researchers that minority students fall victim to cultural test bias (Skiba, Knesting, & Bush, 2002). Legislative measures such as No Child Left Behind and Individuals with Disabilities Improvement Act ensure that minority and special education student achievement are monitored and included in state accountability standards (Yell, et al., 2006). Popham (2001, 2003, 2009) and Skiba, et al. (2002) point to inherent test bias against particular subgroups of students who tend to perform poorly on standardized tests which are constructed to address the dominant white culture. Popham (2001) asserts testing is founded upon inferences; we test what a student knows or can do, using these tests to make predictions about a child's knowledge and skills. An assessment provides a sampling of content objectives which allow a teacher to make inferences regarding the mastery of content based upon the samples used in the test. A reliable test will consistently measure appropriate educational outcomes, however, Popham asserts that the instruction of specific test items invalidates assessment results, thereby causing teachers to make invalid inferences about a student's mastery of instructional content. Instead, the use of multiple means of measurement to best gain an accurate picture of a student's current knowledge and skill levels is encouraged (Popham, 2001; Lorence, 2008).

The administration of standardized tests to determine the fit between an individual and a program or an organization has since been widely utilized:

Thus, the more important the content, the more likely teachers are to stress it. The more that teachers stress important content, the better that students will do on such an item, and the more likely it is that the item will disappear from the test. (Popham, 2001, p. 48)

Popham discusses the use of the statistical *p*-value in determining which test items will be

placed into a standardized test. A test item with a p -value of .90 indicates that 90 percent of the students who answered that item responded correctly. Similarly, a p -value of .50 would indicate that fifty percent of students who attempted a particular test question answered it correctly. Most standardized tests utilize test questions with a p -value in the .40 to .60 range. Test items with p -values over .80 are generally not included in a test as they are considered to be too easy (Popham, 2001). He further notes that teachers generally teach content they believe to be important, and such content items tend to have p -values in the .90 range; thus teachers often prepare students for content which is often excluded from the assessment their students are administered. Popham contends that standardized achievement tests should not be used to measure student learning since the most important content standards are frequently not tested due to high p -values.

Popham (2001) further asserts the measurement of students each year through standardized testing lends itself to inaccurate comparison groups. When sixth grade students are measured in a particular year and those scores are compared to the sixth graders the next year, Popham contends the tests are measuring substantially different sets of students. If year to year comparisons are to be reliable, then groups of students measured from year to year must also be equivalent.

Rothstein-Fisch and Trumbull (2008) support the improvement of educational outcomes for students, but provide caution in the interpretation of testing results when diverse students have not been provided equitable opportunities to learn as well as provided equitable testing. They note that teachers play a powerful role in providing classrooms which respect both individualism and collectivism while working with parent to help them understand and navigate a largely individualistic educational system.

Popham (2001) discusses the link between tested content and socio economic status. He notes there are particular questions which students from middle class and affluent families are more likely to answer correctly than students from low socioeconomic backgrounds as answer choices are substantially influenced by education levels of the parent and family income. Popham adamantly insists that children of middle and upper income families have a definite experiential advantage over children from low socioeconomic homes. He further asserts that children from middle and upper class homes are more likely to be exposed to books, magazines, and television programs which enrich their learning experiences and provide a good foundation for standardized testing. Children from low socioeconomic backgrounds are less likely to have rich reading experiences at home, and their families may not have acquired standard American English such as that found on standardized assessments. As a result, teachers who work with students of high SES will be more likely to have better test scores than teachers who work with low SES students. In his 2001 work, Popham conducted a study of numerous standardized tests at one grade level and found that each subject area had test items linked to socioeconomic status. He determined that the reading test had 15% SES items, the language arts test showed 65% SES items, mathematics had 5% test items linked to SES, while both science and social studies showed 45% of their test items linked to SES.

Popham also links aptitude to a student's ability to perform on standardized tests. Students who have particular abilities to discern the nuances of vocabulary, or perform mathematical functions will naturally score higher in these areas than students whose aptitudes are not formally tested. Hong and Ehrensberger (2007) reiterate the components of state or national standards as 1) content; what students are expected to master and 2) performance; what a student must do in order to demonstrate mastery of the content standard. Hong and

Ehrensberger note that these components allow teachers to develop lessons which focus on the knowledge and skills required of students.

No single assessment tool can serve as a complete diagnostic picture of a student's strengths and weaknesses and as such, the use of a variety of assessment tools, both formal and informal, provide the most meaningful evaluation of student progress (Hong & Ehrensberger, 2007). Peltenburg, Van Den Heuvel-Panhuizen and Doig (2009) note that standardized assessment measures skim the surface and contend student knowledge often remains below the surface.

Hong and Ehrensberger (2007) suggest that informal assessment include an array of student work such as class work, homework, portfolios, journals, student demonstrations, peer assignments, observations and student-teacher conferencing. The development of non-discriminatory assessment measures coupled with multiple measures of assessment provide a comprehensive, holistic view of student abilities, strengths, as well as areas of need.

Popham (2001) further supports a more holistic approach to testing when asserting that student scores on standardized achievement tests do not reflect how well or poorly a teacher is providing instruction because the tests make no distinction between what a child has learned in school, outside of school, or the degree to which the child's natural aptitudes impact performance. Multi dimensional assessment which provides multiple measures of data over time is effective in tracking the progress of diverse learners (Villa, et al., 2004, Popham, 2001).

Curricular Standards

State standards in Texas define the curriculum which students must master at each grade level (TEA, 2010). Researchers currently in the field of curriculum and assessment recommend a

reduction in the numbers of standards which students must master at a particular grade level (Popham, 2009).

Popham (2009) asserts that schools continue to make the same mistakes of educational systems of the past. He notes that schools focus on a multitude of curricular standards in an effort to ensure that students can pass the yearly standardized achievement test. Such focus on too many standards results in teachers covering content superficially. Popham refers to American curriculum standards as ‘a mile wide and an inch deep’. He further notes there simply is not enough time for a standardized test to accurately measure the multitude of state standards at each grade level and content area. Teachers then focus on the standards which they believe to be emphasized on the test, which may or may not be the standards assessed in a particular year.

Popham (2009) argues that teachers spend too much time focusing on their instructional procedures rather than the actual instructional outcomes demonstrated by their students. He urges educators to focus less on the means, and more on the end product through the individual talents in teaching that each educator brings to the instructional effort.

Teachers of students with special needs must be able to adapt the curriculum and instructional activities to meet the diverse and individual needs of the students in the classroom. Adjusting the learning environment requires that teachers know how, when, and what accommodations or modifications must be made to the learning environment to best facilitate student performance (Hong & Ehrensberger, 2007; Browder, et al., 2009).

Creating Culturally Responsive Educational Systems

Hoover (2009) notes that culturally responsive teaching and intervention must take place before any decisions may be made regarding the identification of special education services for

students. Hoover (2009) and Fiedler, et al. (2008) identify stages of cultural competence which must occur before a teacher may be considered culturally proficient:

- ✚ Teachers who are culturally destructive fail to acknowledge student cultures.
- ✚ Teachers who are culturally incapable ignore or give little attention to diverse cultures.
- ✚ Teachers who are culturally blind recognize cultural differences but fail to adjust their teaching to reflect diversity.
- ✚ Teachers with cultural pre-competence make efforts to understand and incorporate cultural values into their lessons in a limited fashion.
- ✚ Teachers with cultural competence value and incorporate culturally responsive strategies into their lessons on a regular basis.
- ✚ Teachers who are culturally proficient embed culturally responsive strategies consistently in the classroom.

The development of cultural competence is essential to distinguishing between cultural differences and learning disabilities (Hoover, 2009). In addition to culturally responsive teaching practices, a teacher must also differentiate the instruction to meet the diverse learning needs of the students in the classroom. Hoover maintains that standards based curriculums frequently fail to respond to the cultural, linguistic, and learning diversity of students today. Differentiation of the curriculum allows diverse learners to successfully navigate the learning process while teaching them the social competence essential to success in the general classroom. When differentiating a lesson, the teacher should ensure that content modifications reflect the culture and experience of the students, integrate skills across content areas, and provide active inquiry based instruction at high cognitive levels with specific cognitive and academic goals (Hoover, 2009).

Linguistic and Behavioral Diversity

Educators must be cognizant of behaviors typical of second language learners which may be mistaken for academic or behavioral disorders, and should familiarize themselves with the developmental stages of language acquisition, such as inter-language and code switching, so as not to mistake a learning difference with a learning disability.

The behaviors of students generally reflect the norms and customs of their diverse cultures and may sometimes be mistaken for behavioral problems. While some students may be comfortable with cooperative learning, other students may be more competitive and less prone to sharing their work. Some students are active learners while others prefer passive learning. Strong aggressive behavior may be encouraged in some cultural backgrounds and may be cause for concern for some teachers. The learning styles of students reflect the ways in which they most readily acquire knowledge and skills and should be utilized by the teacher in lesson planning. Hoover (2009) encourages educators to be well versed in, and accommodating of, the behavioral diversity among students in an effort to meet the needs of diverse learners while ensuring that learning differences are not confused with learning disabilities.

Culturally Responsive Classrooms

Classrooms which provide opportunities for academic success through lessons focusing on student strengths and interests provide the foundation for culturally responsive classrooms. Teachers who build upon student strengths and create learning opportunities supportive of a diverse learning community of students set the standard for culturally responsive teaching (Au, 2010) and use student's prior knowledge to construct a bridge to future learning (Villegas, 2007).

Culturally Responsive Teachers

Gay (2002) defines this critical cultural consciousness as a teacher's awareness of their own culture and its effect upon teaching, learning, and the classroom environment. The need for teachers to respond to the diversity in classrooms requires a corresponding knowledge of the relationship between social behavior and the culture of the student. Gay further insists that teacher knowledge and attitudes about the cultural diversity of their students determine learning opportunities and outcomes for culturally diverse ethnic groups of students. She insists that teacher attitudes encourage some learners while concurrently discouraging the learning of others in the class. Teacher knowledge of values, communication styles, learning preferences, social development, and ethnic affiliation can aid teachers in developing culturally responsive classrooms. Teachers must encourage the achievement of students through the development of a supportive learning environment, individual goal setting, and the teaching of persistence. Successful students often have a vision of their future while unsuccessful students believe that they have no power to impact their future (Jongyeun, 1999, as cited in Cartledge & Kourea, 2008).

Culturally responsive teachers develop classrooms which are disciplined rather than punitive. Classroom rules and routines are well structured and well understood by the students and are an important aspect of learning to live in society (Cartledge & Kourea, 2008). Socially appropriate behavior is strengthened through an atmosphere of caring and commitment to students and to their learning, a sense of fairness regarding student behavior, and proactive teacher responses to student behavior. Teachers who create emotionally warm classrooms and positive relationships with their students develop an atmosphere of unequivocal caring which enhances and supports the learning of diverse students. Chartock (2010) reminds educators that

forty percent of students are minorities while ninety-five percent of teachers are white; thus the importance of culturally responsive teaching is paramount to the success of a diverse student population. According to Black (2006) culturally responsive classroom management should reflect teacher behaviors which:

1. Recognize their own ethnocentrism: decisions and judgments which a teacher may make based upon their own cultural view.
2. Understand the cultural heritage of their students.
3. Become familiar with the cultural, social, and economic issues surrounding diverse cultures.
4. Encourage the learning of every diverse learner.
5. Create warm and caring classrooms where every individual learner is respected, validated, and encouraged.

Culturally Responsive Instruction

Kathryn Au (2010) in her work with culturally diverse students defines culturally responsive instruction as teaching which allows students of various cultural backgrounds to use the strengths they bring from home to support their learning in the classroom. Researchers in the area of culturally responsive instruction recommend practices which effective teachers should incorporate into their daily instruction (Bazron, et al., 2005; Villegas, 2007; Chartock, 2010):

- ☞ Enhance social skills development through instruction linked to cultural norms of social interaction for students of diverse backgrounds.
- ☞ Adjust instruction and wait time with student diversity in mind; cultural norms may require more wait time for some students than for others.

- 📖 Teachers must be sensitive to the transition from home to school that students of diverse backgrounds may experience, and work with families in the transition piece.
- 📖 Assist parents of diverse backgrounds in gaining the cultural capital needed to navigate life in American society.
- 📖 Utilize culturally responsive and respectful approaches in lesson planning, character education, and social skills instruction which embraces the diversity of all students.
- 📖 Use constructivist approaches to activate student prior knowledge and provide the foundation for skills development.
- 📖 Development home-school relationships to further support each student.
- 📖 The teacher must understand his or her own ethnocentrism and consciously plan lessons and create a classroom environment which welcomes diversity.

The provision of explicit, direct instruction rich in phonological awareness supports culturally and linguistically diverse learners (Cartledge & Kourea, 2008). The use of explicit instruction allows students to participate fully in a pace that is appropriate to the learners while encouraging the students to be highly engaged in the lesson activities.

A multi-cultural approach to instruction defines a culturally responsive classroom (Gay, 2002). The incorporation of culturally responsive climates and multi-cultural curriculum provide the framework for a curriculum with which every student can identify, thus increasing student interest and activating prior knowledge (Gay). Budd (2007) believes a multicultural curriculum supports the needs of all learners. Brown (2007) suggests that culturally responsive teachers understand how deeply culture impacts learning by developing instruction responsive to student cultures. Such teachers design and implement instruction which facilitates success and negates failure.

Hoover (2009) notes that one of the fundamental questions facing educators today is one of closing the achievement gap for diverse learners. He asserts that greater understanding of the distinction between learning differences and learning disabilities in diverse learners will lead to more appropriate instruction and thus reduce the achievement gap among students with diverse learning needs. Hoover defines achievement gap as the disparity in achievement which occurs among various groups of students.

Creating Culturally Relevant Schools

Michael Fullan, in his research in the area of educational change, insists teachers are powerful agents of systemic change: “Educational change depends upon what teachers think and do-it’s as simple and as complex as that” (Michael Fullan, as cited in Glasgow, McNary, & Hicks, 2008, p. xi).

Madsen and Mabokela (2005) recommend an organizational approach for school administrators which focuses upon the creation of an inclusive work environment for teachers which, in turn, responds to the diverse needs of students within the school. They note that teachers not of European American extraction are typically expected to embrace the values, norms, belief systems, and cultures of the schools in which they work. The attitudes which European American teachers hold of teachers of color result in stereotypical behavior which limits the role of the non European American teacher within the organization.

The school leader’s ability to implement organizational structures in schools with diverse student populations is crucial to the development of instructional programming which supports every type of learner. Madsen and Mabokela (2005) recommend that school administrators examine their hiring processes initially to ensure a diverse teaching staff. Administrators should

also collect and study student data in the areas of testing, grades, graduation rates, and discipline referrals in an effort to provide school structures supportive of the needs of diverse students.

Policy Making

The Elementary and Secondary Education Act is currently in the process of reauthorization. The United States Department of Education (2010) presented a blueprint for the reauthorization of ESEA in the spring of 2010 which set the following priorities:

- College and Career Ready Students

Every student will graduate from high school prepared to enter college or career without regard to race, ethnicity, income, gender, or disability.

- States should adopt standards in mathematics and English language arts to be prepared for college or career.
- Assessments will be aligned to college and career ready standards.
- Students will receive a well rounded education which prepares them to live and work in a global society.

Great Teachers and Leaders in Every School

- Effective teachers and principals will be determined based upon student growth as well as other factors. Programs will assist in recruiting, retaining, and rewarding effective teachers and principals.
- Place the best teachers and leaders in the schools where they are needed the most.
- Strengthen teacher and leader preparation through programs which support new teachers and principals in high need schools.

Equity and Opportunity for All Students

- Rigorous and fair accountability for all students in our schools. Rewards for progress will be implemented.
- Meeting the needs of diverse learners through appropriate instruction and challenging curriculum which prepares them for college and career.
- Greater equity in resources between high and low poverty schools.

Raise the Bar and Reward Excellence

- Race to the Top will provide incentives for school districts which implement policies and practices which result in the improved outcomes for students.
- Supporting school choice through public choice options for schooling.
- Promoting a culture of college readiness and success through challenging high school curriculum.

Promote Innovation and Continuous Improvement

- Investing in Innovation Fund will support schools and districts with proven innovation and success.
- Supporting, recognizing, and rewarding local innovations which allow districts to use funding for local innovations.
- Supporting student success through redesign of school days, school calendars which create the school as the center of the community.

Within the blueprint for the reauthorization of the Elementary and Secondary Education Act a focus is placed upon meeting the needs of students with disabilities throughout the Act as well as through Individuals with Disabilities Education Act. ESEA will provide increased support for

inclusion and improved educational outcomes for students with disabilities. The plan notes the importance of the following:

- Teachers and leaders who are well prepared to meet the needs of diverse learners.
- Assessments which accurately measure student knowledge and growth of students with disabilities.
- District and school implementation of curriculum which is founded upon universal design.

Legislation of recent years such as Individuals with Disabilities Education Act, Individuals with Disabilities Education Improvement Act, and No Child Left Behind have mandated the general curriculum for all students, and for students with special needs. In addition, students with special needs should be considered for the general education classroom, and all students with disabilities are administered a standardized state assessment which reports results for the special education subgroup (Yell, et al., 2006). The reauthorization of the Elementary and Secondary Education Act, in combination with IDEA, IDEIA, and NCLB ensure that the educational needs of diverse learners are focused upon college and career readiness standards (U.S.D.E., 2010).

Recommendations for Future Research

Policy Making

The impetus for systemic change serves as a desirable side effect of legislative reform measures. Future legislation should continue to address inclusion from the state level to the classroom level through policies which address inclusion, appropriate instruction, mastery of learning, alternative achievement testing measures, and teacher practices. With the mandates of

federal policy, state and local education agencies should be provided the fiscal support to implement legislative requirements for inclusive programming.

Inclusive Programming

The design and implementation of inclusive programming which meets the needs of diverse learners through culturally competent instruction should be a focus of future research. Such research examining students' academic, social, and emotional outcomes of inclusion may pave the way for necessary supports and services for diverse student populations. Longitudinal qualitative studies researching the impact of inclusion upon students with special needs, their parents, teachers, and communities will shed light upon issues of equity and diversity, as well as bring awareness to societal influence upon systems of change.

Teacher Development

Systemic change can only occur through teacher development in the desired areas of reform. Research which focuses upon best practice, culturally responsive systems, and meeting the needs of all diverse learners will provide the reference point for educational programming which supports every student who walks through the front doors of the community school. Research which examines the current educational frameworks for teacher preparation programs at the university level must link their research to educational outcomes demonstrated by children in our public school systems in an effort to address policy and programming for teacher preparation studies which graduate teachers knowledgeable in special education, general education, culturally responsive instructional practices, and instruction which meets the needs of diverse learners.

Equity, Diversity, and Inclusion

The inclusion of students with special needs into the general education classroom with their age level peers strikes deep at the heart of issues of equity. Historical study of the journey of children and adults with disabilities provides the lens through which society views diversity among its members. We have evolved from a period in history in which a disabled person was locked and caged, to bringing the disabled into the public schools, and finally, to welcoming children with disabilities into the classroom to sit and learn side by side with their equals. While the past has witnessed tremendous discrepancies in education between the disabled and the non-disabled, the future is bright with the promise of fairness, equity, and respect for the diversity of every single individual in society.

Summary

Chapter five commenced with an overview of the findings of this research study. Mathematics achievement was found to be strongly correlated to the amount of time a student with special needs spent in the general education setting, while reading achievement was correlated to amount of time included in the general education setting for those students spending greater than fifty percent of their day in the general education setting. Correlations and crosstabulations presented a deeper understanding which underscored the positive impact of inclusion upon passing rates in mathematics and reading for students with special needs spending more than half of their day included with their general education peers. Interestingly, socioeconomic status had no correlation to the achievement passing rates of students with special needs in mathematics in both years of the study, and correlation to reading in only the first year of the study. Such findings call into question the effects of disability upon achievement, and the degree to which the effects of disability eclipse the effects of socioeconomic status. In addition, the appropriate testing measure, such as a modified version of the state standardized test, may reduce the effects which socioeconomic status typically demonstrates upon student achievement.

Following an interpretation of the research results was a discussion of the current research regarding the mathematics and reading achievement of students with special needs. While research in the area of mathematics supports the findings of the research study, current research in the field of reading difficulties notes the discrepancies and difficulties associated with the teaching of reading when compared to the more methodical and hierarchical nature of the teaching of mathematics.

Recommendations were provided for developing inclusive environments which utilize culturally responsive instruction to meet the needs of diverse learners. Additionally, specific

recommendations for instructional practices which facilitate the development of mathematics skills and phonological decoding skills pre-requisite for the acquisition of reading were presented at length.

The future of inclusion hinges upon societal views of equity and diversity. Legislative reform measures of the future were discussed with regard to student achievement, educational systems change, and instructional practice. The chapter concluded with recommendations for future research efforts which should examine the impact of inclusion upon children, parents, teachers, school systems, and society. Issues of equity and diversity provide the foundation for a future which respects and honors every member of society.

The history of students with special needs has been, and continues to be, a journey both painful and exhilarating. Historical narrative demonstrates that students with disabilities have been mistreated, ignored, segregated, and under estimated by a society uncertain about the inclusion of the disabled. Legislative measures as well as societal interventions have slowly begun to erode the barriers which exclude students with disabilities. While the path has been long and arduous, the future burns bright with the strides which have been made, and with the hope that the very notions of equality which founded this great nation will erode barriers while building bridges connecting all members of society.

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APPENDIX A

IRB DOCUMENTATION



Research and Evaluation

**Request for Approval to Conduct Research in Multiple Schools
Access to Confidential Data Form**

Researcher: Kathleen Black Date: February 2, 2010

Title: Closing the Achievement Gap: The Impact of Least Restrictive Environment
Upon Special Need Student Achievement Scores

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Justification: Educational Research

I understand that any unauthorized disclosure of confidential information is illegal as provided in the federal Family Educational Rights and Privacy Act of 1974 (FERPA), 20 U.S.C. 1232 *et seq.* and in the implementing federal regulations found in 34 CFR Part 99. FERPA is specifically incorporated into the Texas Public Information Act (formerly known as the Open Records Act). It is listed as an exception to records that are subject to disclosure to the public.

In addition, I understand that any data, datasets or output reports that I, or any authorized representative, are confidential and the data are to be protected. I will not distribute to any unauthorized person any data reports that I have access to or may generate using confidential data.

I hereby agree that failure to abide by the requirements of this agreement may lead to the immediate revocation of any research study that I may be performing in the El Paso Independent School District. I understand that any intentional, knowing, or negligent release of confidential student information to unauthorized persons may also subject me to a legal cause of action for violation of an individual's civil rights in addition to state or federal criminal penalties.

Kathy Black
Researcher's Signature

2-5-10
Date

RL Souder
Faculty or Staff Sponsor of Research Project's Signature

2/4/2010
Date



Research and Evaluation

**Request for Approval to Conduct Research
University/College Professor's, Thesis or Dissertation
Chairperson's Affidavit**

Name of graduate student: Kathleen Black

The above-named graduate student has obtained the necessary clearance from this university to submit to El Paso Independent School District a request to conduct research as part of a course of study or the master's or doctoral degree-seeking research proposal entitled:

Closing the Achievement Gap: The Impact of Least Restrictive Environment Upon Special Needs Student Achievement Scores

I have reviewed this research proposal, in the form which it is being submitted herewith, and judge it to meet the quality standards of this university, as well as the information requirements and research proposal quality expectations the El Paso Independent School District has set forth in its *Guidelines to Conduct Research* in EPISD research proposal application form.

Chairperson's name (please print): Dr. Richard Sorenson

Title: Associate Professor

College/University: University of Texas El Paso

RSorenson
Chairperson's Signature

2/4/2010
Date



Research and Evaluation

**Request for Approval to Conduct Research
School Principal's and/or Sponsor's Affidavit**

Name of student: Kathleen Black

The above-named student has obtained the necessary clearance from this school to submit to El Paso Independent School District a request to conduct research as part of a course of study research proposal entitled:

Closing the Achievement Gap: The Impact of Least Restrictive Environment Upon Special
Need Student Achievement Scores

I have reviewed this research proposal, in the form which it is being submitted, and judge it to meet the quality standards of this school, as well as the information requirements and research proposal quality expectations the El Paso Independent School District has set forth in its *Guidelines to Conduct Research* in EPISD research proposal application form.

Principal's/Sponsor's name (please print): Dr. Richard Sorenson

School: University of Texas El Paso


Principal's/Sponsor's Signature

2/4/2010
Date

☐ I do not wish to participate.

C. Complete if affiliated with EPISD (employees may need to complete both B and C)

School/Department: Special Education EPISD E-Mail: kblack@episd.org

EPISD Telephone: 881-2510 Fax: 771-1144

Part II. Information About the Study

Activity	When	What	Who	Time Frame
1	2008	TAKS, TAKS A, TAKS M	3 rd Grade Special Ed	Admin 1 Reading / Math
2	2009	TAKS, TAKS A, TAKS M	4 th Grade Special Ed	Reading/ Math
3	2010	TAKS, TAKS A, TAKS M	5 th Grade Special Ed	Reading/ Math
4				
5				

Proposed Start Date January 2010 End Date August 2010

Proposed Completion Date of Study August 31, 2010

Hypothesis: **The amount of time which a special needs student spends in the least restrictive environment will show a positive correlation to the TAKS achievement scores of these students.**

Purpose of Study: to
determine if the
amount of time in
the least restrictive
environment
impacts the TAKS
scores of special
needs students

How will EPISD benefit from study:
the special education department will
be able to utilize this study to develop
and implement improved instructional
programming for special needs
learners.



Research and Evaluation

IRB # 156072-1
R&E ID # _____

Research Proposal Form

Please read the instructions you receive in this packet carefully. You may submit this form electronically provided you use Microsoft Word so that your e-mail can be opened easily. Include items a-e with your submission:

- This completed form (1 copy if submitted by mail).
- The *Informed Consent* forms you will use for they study (1 copy if submitted by mail).
- One sample of each data collection instrument you plan to use for the study. E-mail scanned documents if possible. Otherwise, send by mail separately.
- The authorization from the Institutional Research Board of your institution (as required for studies involving human subjects) if applicable.
- A detailed anticipated timeline for your study.

Submit all materials to:

Carlos Perales Research, Accountability, & Assessment El Paso Independent School District 6531 Boeing Drive EL Paso, TX 79925	Office Number: (915) 881 – 2412 Fax Number: (915) 771 – 1145 e-mail: (Preferred communication form) cperales@episd.org <i>Signed forms must be mailed</i>
---	---

Part I. Overview

A. Principal Investigator Information

Name: Kathleen Black Date Submitted: _____

B. Complete if affiliated with an extra-district institution

Institution: _____ Date: _____

Address: _____

City: _____ State: _____ Zip: _____

E-Mail Address: _____

Telephone: _____ Fax: _____

Can you receive confidential information on the fax number and e-mail address provided above? _____

Revised March 2007 – Perales

Page 1

February 3, 2010

Christian Meissner, Ph.D.
Chair, UTEP Institutional Review Board
ORSP Admin-209
El Paso, TX 78868

Dear Dr. Meissner:

The purpose of this letter is to grant [Kathleen Black], a [graduate] at the University of Texas at El Paso permission to conduct research at [El Paso Independent School District]. The project, "[Dissertation Research: Closing the Achievement Gap: The Impact of Least Restrictive Environment Upon Special Education Student Test Scores]" entails [TAKS, TAKS Accommodated, and TAKS M test scores for third grade special needs students 2008, fourth grade special needs students 2009, and fifth grade special needs students 2010 will be studied to determine if least restrictive environment impact achievement scores of special needs students]. [El Paso ISD] was selected because [this research will allow me to make instructional programming decisions for our special needs population and fulfill requirements for dissertation research]. [Director of Curriculum, Special Education, El Paso ISD>]. [Results of study will be shared with the special education department of El Paso ISD>]. I, [Carol Powell] do hereby grant permission for [Kathleen Black] to conduct [dissertation research] at [El Paso Independent School District].

Sincerely,



[Carol Powell]

[Associate Superintendent for Special
Education]

**Request for Approval to Conduct Research
Application Form**

(Each participating school principal must complete a Principal's Affidavit)

Applicant's Name: Kathleen Black

Mailing Address: 6830 Gato Road

City: El Paso State: TX Zip: 79932

School: University of Texas El Paso

Daytime Phone: 915-881-2510 Cell Phone: _____

Title of Study: Closing the Achievement Gap: The Impact of Least Restrictive
Environment Upon Special Needs Student Achievement Scores

Study Start Date: 2008-2009 sch. year Study End Date: 2009-2010 sch. year

Brief Description: This study seeks to determine the impact which the amount of time spent in least restrictive environment has upon the achievement scores (TAKS, TAKS Accommodated, TAKS M) of special needs learners. Special needs TAKS scores 2008-2010 in reading and math will be correlated with the amount of time spent in the least restrictive setting.

With this completed form, submit the following to the Research Review Panel of the Research and Evaluation Office, 6531 Boeing Drive, El Paso, TX 79925:

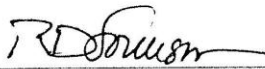
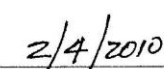

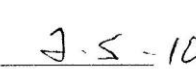
1. Letter endorsing the proposed study from the school district department head most closely associated with the topical area of this research (See Guidelines that accompanied application materials from the district).
2. Thesis of Dissertation Chairperson's Affidavit (fully completed) — when applicable.
3. Access to Confidential Data Form (with applicant's signature).
4. The research proposal (1 copy). Note: Please read the *Elements of a Research Proposal* concerning the district's expectations regarding the content and compositional presentation of the proposal.
5. A copy of approval by the Institutional Review Board (IRB) with IRB # 156073-1

Usually, proposals are reviewed the third Tuesday of each month. The deadline for submitting the proposal is ten working days in advance of the review date, typically Monday, two weeks before the review. The R & E Office will notify the applicant by mail of the district's decision concerning the proposal.

The principal(s) who school(s) is involved in the study will decide on participation, based on the recommendation of the Research Review Panel and campus needs.

For District Employees Only

If the proposed study is to be conducted at the EPISD site or office where you work, discuss the project with your supervisor and have him/her sign this form. This only indicates that your supervisor has been made aware of the proposal and their consent to sponsor your study. However, it **does not** denote approval or disapproval until the Research Review Panel authorizes the study.

			
<i>Supervisor's signature</i>	<i>Date</i>	<i>Applicant's Signature</i>	<i>Date</i>



Research and Evaluation

**Request for Approval to Conduct Research
University/College Professor's, Thesis or Dissertation
Chairperson's Affidavit**

Name of graduate student: **Kathleen Black**

The above-named graduate student has obtained the necessary clearance from this university to submit to El Paso Independent School District a request to conduct research as part of a course of study or the master's or doctoral degree-seeking research proposal entitled:

I have reviewed this research proposal, in the form which it is being submitted herewith, and judge it to meet the quality standards of this university, as well as the information requirements and research proposal quality expectations the El Paso Independent School District has set forth in its *Guidelines to Conduct Research* in EPISD research proposal application form.

Chairperson's name (please print): **Dr. Richard Sorenson**

Title:

College/University: **University of Texas El Paso**


Chairperson's Signature

2/4/2010
Date



February 11, 2010

Kathleen Black
6830 Gate Road
El Paso, Texas 79932

Dear Ms. Black,

We have received your request to conduct research in the El Paso Independent School District. Congratulations, your study, *Closing the Achievement Gap: The Impact of Least Restrictive Environment Upon Special Needs Student Achievement*, has been approved. You will conduct the research through the Special Education Department under the endorsement of Associate Superintendent for Special Education Carol Powell. Once the study is completed we would appreciate if you could send a copy of your findings to our department for our records. Thank you.

You have our best wishes for a successful continued study. Please contact me at (915) 881-2412 or email me at cperales@episd.org

Sincerely,

A handwritten signature in cursive script, appearing to read "Carlos Perales".

Carlos Perales
Researcher

cc: Carol Powell, Associate Superintendent for Special Education

Approved:

A handwritten signature in cursive script, appearing to read "James Steinhauser".
James Steinhauser, Assistant Superintendent

El Paso Public Center 20000
4001 Blackgarden - El Paso, Texas 79905 - (915) 881-2412 • FAX: (915) 771-1445
Mail Stop America, P.O. Box 30160 • El Paso, Texas 79969-0160

APPENDIX B

TABLES

Table 1.1: Subpopulation Percentages in Northern Pass I. S. D.

	<u>Northern Pass</u>	<u>State</u>
Ec. Disadv.	69%	57%
ELL (Spanish speaking)	30%	17%
Bilingual (Spanish)	23%	16%
Special Ed.	8%	9%

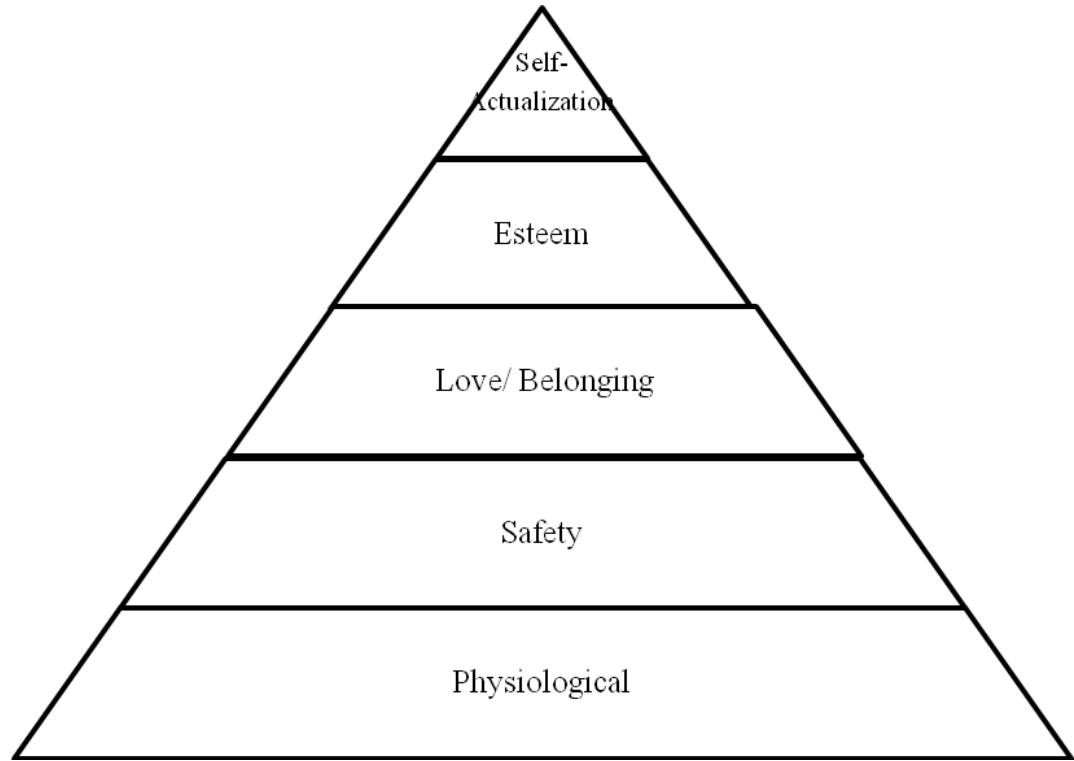
NPISD Research and Evaluation Department, 2010

Table 1.2: PEIMS Codes for Percentage of Day Included

	<u>PEIMS</u> 40	<u>PEIMS</u> 41	<u>PEIMS</u> 42	<u>PEIMS</u> 43	<u>PEIMS</u> 44
% of Day	100%	> or = 79%	21%- 49%	50%- 60%	> 60%
Descriptor	Student spends 100% of day included in general ed classes.	Student spends less than 21% of day in special education classes.	Student spends 21%-49% of day in special education classes.	Student spends 50%-60% of day in special education classes.	Student spends greater than 60% of day in special education classes.

Research and Evaluation Department, N.P.I.S.D., 2010

Table 2.1: Maslow's Hierarchy of Needs



Adapted from Maslow's Hierarchy of Needs (Hepworth Berger, 2004)

**Table 3.1: Socioeconomic Status of Students with
Special Needs 2007-2009**

	N	% of Total
0= Students who Pay for Lunch	51	20.3
1= Students who Receive Free or Reduced Lunch	200	79.7
Total	251	100

N.P.I.S.D. Research and Evaluation Department, 2010

Table 3.2: Gender of Special Education Students 2007-2009

	# Students	% of Total
Female	70	27
Male	181	72.1
Total	251	100

N.P.I.S.D. Research and Evaluation Department, 2010

**Table 4.1: Instructional Setting for Special Education
Students 2007-2008 and 2008-2009**

	<u>2007-2008</u>		<u>2008-2009</u>	
	<i>N</i>	% of Total	<i>N</i>	% of Total
40	92	36.7	67	26.7
41	46	18.3	111	44.2
42	67	26.7	33	13.1
43	6	2.4	8	3.2
44	40	15.9	32	12.7
Total	251	100	251	100

Research and Evaluation Department, NPISD, 2010

Table 4.2: Students by Instructional Setting and Achievement Test Mathematics 2007-2008, 2008-2009

	<u>TAKS</u>		<u>TAKS A</u>		<u>TAKS M</u>		<u>TOTAL</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
40								
2007-2008	15	16.3	62	67.4	15	16.3	92	100
2008-2009	7	6.4	39	58.2	21	31.3	67	100
41								
2007-2008	8	17.8	25	55.6	12	26.7	45	100
2008-2009	12	10.8	36	32.4	63	56.8	111	100
42								
2007-2008	4	6.1	15	22.7	47	71.2	66	100
2008-2009	0	0	6	18.8	26	81.3	32	100
43								
2007-2008	0	0	2	33.8	4	66.7	6	100
2008-2009	1	12.5	2	25	5	62.5	8	100
44								
2007-2008	0	0	8	20.5	31	79.5	39	100
2008-2009	0	0	7	23.3	23	76.7	30	100
Total								
2007-2008	27	10.9	112	45.2	109	14.4	248	100
2008-2009	20	8.1	90	36.3	138	55.6	248	100

Research and Evaluation, N.P.I.S.D.,
2010

**Table 4.3: Crosstabulation of Instructional Setting and TAKS
Mathematics Pass/Fail Rates 2008**

Instructional Setting	TAKS Math 2008					
	<u>Fail</u>		<u>Pass</u>		<u>Total</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
40	2	13.3	13	86.7	15	100
41	5	62.5	3	37.5	8	100
42	2	50	2	50	4	100
43	0	0	0	0	0	0
44	0	0	0	0	0	0
Total	9	33.3	18	66.7	27	100

Research and Evaluation, N.P.I.S.D, 2010

Table 4.4: Crosstabulation of Instructional Setting and TAKS A Mathematics Pass/Fail Rates 2008

Instructional Setting	<u>TAKS A Math 2008</u>					
	<u>Fail</u>		<u>Pass</u>		<u>Total</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
40	27	43.5	35	56.5	62	100
41	14	60	10	40	25	100
42	9	60	6	40	15	100
43	1	50	1	50	2	100
44	3	37.5	5	62.5	8	100
Total	55	49.1	57	50.9	112	100

Research and Evaluation, N.P.I.S.D, 2010

Table 4.5: Crosstabulation of Instructional Setting and TAKS M Mathematics Pass/Fail Rates 2008

Instructional Setting	TAKS M Math 2008					
	<u>Fail</u>		<u>Pass</u>		<u>Total</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
40	1	6.7	14	93.3	15	100
41	1	8.3	11	91.7	12	100
42	7	14.9	40	85.1	47	100
43	2	50	2	50	4	100
44	24	77.4	7	22.6	31	100
Total	35	32.1	74	67.9	109	100

Research and Evaluation, N.P.I.S.D, 2010

**Table 4.6: Model Summary and Hosmer-Lemeshow
Mathematics 2007-2008**

	Chi-Square	df	Sig.
Model Coefficients	38.64	6	.000
Hosmer-Lemeshow Test	6.62	6	0.358

Research and Evaluation Department, N.P.I.S.D., 2010

Spearman Correlation for Mathematics and SES 2007-2008

	SES
Mathematics Passing	
Correlation Coefficient	-0.04
Significance (2-tailed)	0.53

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

Research and Evaluation Department, N.P.I.S.D., 2010

Table 4.7: Regression Equation, Mathematics 2007-2008

PEIMS	β	S.E	Chi-Sq	df	Sig	Exp (B)
40	2.48	0.506	24.06	1	.000	11.98
41	1.69	0.522	10.51	1	0.001	5.42
42	2.02	0.469	18.54	1	.000	7.53
43	1.06	0.937	1.27	1	0.26	2.87
Test Type	0.736	0.188	15.32	1	.000	2.08
SES	.000	0.356	.000	1	0.999	1.000

Research and Evaluation Department, N.P.I.S.D., 2010

Table 4.8: Correlation Matrix for Mathematics 2007-2008

	Constant	LRE 40	LRE 41	LRE 42	LRE 43
Constant	1	-0.781	-0.657	-0.558	-0.25
PEIMS 40	-0.781	1	0.71	0.646	0.309
PEIMS 41	-0.657	0.71	1	0.601	0.291
PEIMS 42	-0.558	0.646	0.601	1	0.303
PEIMS 43	-0.25	0.309	0.291	0.303	1
Test Type	-0.762	0.551	0.421	0.205	0.078
SES	-0.469	0.072	0.027	0.078	0.013

Research and Evaluation Department, N.P.I.S.D., 2010

Table 4.9: Correlations for Mathematics 2007-2008 by Test

		Value <i>r</i>	Asymp. Std. Error	Approx. Sig.
TAKS	Valid Cases <i>N</i>	27		
	Spearman Correlation	0.434	0.175	0.024
TAKS Accommodated	Valid Cases <i>N</i>	112		
	Spearman Correlation	0.093	0.095	0.33
TAKS Modified	Valid Cases <i>N</i>	109		
	Spearman Correlation	0.575	0.072	.000

Research and Evaluation Department, N.P.I.S.D., 2010

Table 4.10: Correlation for Instructional Setting, Pass/Fail, and Test Type Mathematics 2007-2008

Spearman's rho		Inst. Setting	Pass/Fail	Test Type	SES
Instruc. Setting	Correlation Coeff.	1	*-0.163	**0.486	-0.46
	Sig. (2 tailed)		0.01	.000	0.99
	<i>N</i>	248	248	248	248
Pass/Fail	Correlation Coeff.	*-0.163	1	**0.164	-0.04
	Sig. (2 tailed)	0.01		0.01	0.53
	<i>N</i>	248	248	248	248
Test Type	Correlation Coeff.	**0.486	**0.164	1	.16**
	Sig. (2 tailed)	.000	0.01		0.01
	<i>N</i>	248	248	248	248

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

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

Research and Evaluation Department, N.P.I.S.D., 2010

**Table 4.11: Crosstabulation of Instructional Setting and TAKS
Mathematics Pass/Fail Rates 2009**

Instructional Setting	<u>TAKS Math 2009</u>					
	<u>Fail</u>		<u>Pass</u>		<u>Total</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
40	0	0	7	100	7	100
41	3	25	9	75	12	100
42	0	0	0	0	0	0
43	0	0	1	100	1	100
44	0	0	0	0	0	0
Total	3	15	17	85	20	100

Research and Evaluation, N.P.I.S.D, 2010

Table 4.12: Mathematics Pass/Fail Rates 2009

Instructional Setting	TAKS Accommodated Math 2009					
	<u>Fail</u>		<u>Pass</u>		<u>Total</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
40	11	28.2	28	71.8	39	100
41	16	44.4	20	55.6	36	100
42	1	16.7	5	83.3	6	100
43	1	50	1	50	2	100
44	4	57.1	3	42.9	7	100
Total	33	36.7	57	63.3	90	100

Research and Evaluation, N.P.I.S.D, 2010

Table 4.13: Crosstabulation of Instructional Setting and TAKS M Mathematics Pass/Fail Rates 2009

Instructional Setting	<u>TAKS M Math 2009</u>					
	<u>Fail</u>		<u>Pass</u>		<u>Total</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
40	2	9.5	19	90.5	21	100
41	4	6.3	59	93.7	63	100
42	6	23.1	20	76.9	26	100
43	0	0	5	100	5	100
44	11	47.8	12	52.2	23	100
Total	23	16.7	226	83.3	138	100

Research and Evaluation, N.P.I.S.D, 2010

**Table 4.14: Model Summary and Hosmer-Lemeshow
Mathematics 2008-2009**

	Chi-Square	df	Sig.
Model Coefficients	26.06	6	.000
Hosmer-Lemeshow Test	3.13	8	0.926

Research and Evaluation Department, N.P.I.S.D., 2010

Spearman Correlation for Mathematics and SES 2008-2009

	SES
Mathematics Passing	
Correlation Coefficient	0.06
Significance (2-tailed)	0.34

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

Research and Evaluation Department, N.P.I.S.D., 2010

Table 4.15: Regression Equation for Mathematics 2008-2009

PEIMS	β	S.E	Chi-Sq	df	Sig	Exp (B)
40	2.25	0.561	16.07	1	.000	9.47
41	1.77	0.487	13.19	1	.000	5.87
42	1.33	0.589	5.1	1	0.024	3.78
43	2.16	1.18	3.35	1	0.067	8.7
Test Type	-0.157	0.377	17.29	1	0.528	0.208
SES	-0.075	0.385	1.56	1	0.211	0.928

Research and Evaluation Department, N.P.I.S.D., 2010

Table 4.16: Correlation Matrix for Mathematics 2008-2009

	Constant	40	41	42	43
Constant	1	-0.525	-0.637	-0.497	-0.202
PEIMS 40	-0.525	1	0.693	0.476	0.273
PEIMS 41	-0.637	0.693	1	0.534	0.294
PEIMS 42	-0.497	0.476	0.534	1	0.218
PEIMS 43	-0.202	0.274	0.294	0.218	1
Test Type	-0.081	-0.444	-0.232	-0.072	-0.113
SES	-0.638	0.108	0.131	0.023	-0.042

Research and Evaluation Department, N.P.I.S.D., 2010

Table 4.17: Correlations for Mathematics 2008-2009 by Test

		Value <i>r</i>	Asymp. Std. Error	Approx. Sig.
TAKS	Valid Cases <i>N</i>	20		
	Spearman Correlation	0.254	0.114	0.281
TAKS Accommodated	Valid Cases <i>N</i>	90		
	Spearman Correlation	0.142	0.104	0.183
TAKS Modified	Valid Cases <i>N</i>	138		
	Spearman Correlation	0.319	0.086	.000

Research and Evaluation Department, N.P.I.S.D., 2010

Table 4.18: Correlation for Instructional Setting, Pass/Fail, and Test Type Mathematics 2008-2009

Spearman's rho		Inst. Setting	Pass/Fail	Test Type	SES
Instruc. Setting	Correlation Coeff.	1	*-.153	** .324	0.48
	Sig. (2 tailed)		0.015	.000	0.21
	<i>N</i>	248	248	248	248
Pass/Fail	Correlation Coeff.	*-.153	1	** .212	0.06
	Sig. (2 tailed)	0.015		0.001	0.34
	<i>N</i>	248	248	248	248
Test Type	Correlation Coeff.	** .324	** .212	1	.000
	Sig. (2 tailed)	.000	0.001		0.99
	<i>N</i>	248	248	248	248

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

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

Research and Evaluation Department, N.P.I.S.D., 2010

**Table
4.19: Students by Instructional Setting and Achievement Test
Reading 2007-2008 and 2008-2009**

	<u>TAKS</u>		<u>TAKS A</u>		<u>TAKS M</u>		<u>TOTAL</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
40								
2007-2008	20	21.7	60	65.2	12	13	92	100
2008-2009	13	19.4	32	47.8	22	32.8	67	100
41								
2007-2008	9	19.6	22	47.8	15	32.6	46	100
2008-2009	14	12.6	32	28.8	65	58.6	111	100
42								
2007-2008	2	3	20	29.9	45	67.2	67	100
2008-2009	0	0	6	18.8	26	81.3	32	100
43								
2007-2008	0	0	2	33.3	4	66.7	6	100
2008-2009	0	0	3	37.5	5	62.5	8	100
44								
2007-2008	2	5	8	20	30	75	40	100
2008-2009	0	0	7	23.3	23	76.7	30	100
Total								
2007-2008	33	13.1	112	44.6	106	42.2	251	100
2008-2009	27	10.9	80	32.3	141	56.9	248	100

Research and Evaluation, N.P.I.S.D.,
2010

**Table 4.20: Crosstabulation of Instructional Setting and TAKS
Reading Pass/ Fail Rates 2008**

Instructional Setting	<u>TAKS Reading 2008</u>					
	<u>Fail</u>		<u>Pass</u>		<u>Total</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
40	1	5	19	95	20	100
41	4	44	5	55.6	9	100
42	1	0	1	0	2	100
43	0	0	0	0	0	100
44	1	50	1	50	2	100
Total	7	21.2	26	78.8	33	100

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Table 4.21: Crosstabulation of Instructional Setting and TAKS A Reading Pass/Fail Rates 2008

Instructional Setting	<u>TAKS A Reading 2008</u>					
	<u>Fail</u>		<u>Pass</u>		<u>Total</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
40	24	40	36	60	60	100
41	10	45.5	12	54.5	22	100
42	12	60	8	40	20	100
43	1	50	1	50	2	100
44	6	75	2	25	8	100
Total	53	47.3	59	52.7	112	100

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**Table 4.22: Crosstabulation of Instructional Setting and TAKS M
Reading Pass/ Fail Rates 2008**

Instructional Setting	<u>TAKS M Reading 2008</u>					
	<u>Fail</u>		<u>Pass</u>		<u>Total</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
40	0	0	12	100	12	100
41	0	0	15	100	15	100
42	4	8.9	41	91.1	45	100
43	2	50	2	50	4	100
44	11	36.7	19	63.3	30	100
Total	17	16	89	84	106	100

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**Table 4.23: Model Summary and Hosmer-Lemeshow
Reading 2007-2008**

	Chi-Square	df	Sig.
Model Coefficients	54.01	6	.000
Hosmer-Lemeshow Test	7.8	7	0.35

Research and Evaluation Department, N.P.I.S.D., 2010

Spearman Correlation for Reading and SES 2007-2008

	SES
Reading Passing	
Correlation Coefficient	* -.14
Significance (2-tailed)	0.02

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

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

Research and Evaluation Department, N.P.I.S.D., 2010

Table 4.24: Regression Equation for Reading 2007-2008

PEIMS	β	S.E	Chi-Sq	df	Sig	Exp (B)
40	2.36	0.545	18.79	1	.000	10.61
41	1.81	0.57	10.1	1	0.001	6.11
42	1.4	0.516	7.35	1	0.007	4.05
43	0.003	1.03	.000	1	0.997	1.000
Test Type	1.27	0.22	33.15	1	.000	3.55
SES	-0.764	0.431	3.14	1	0.076	0.088

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Table 4.25: Correlation Matrix for Reading 2007-2008

	Constant	40	41	42	43
Constant	1	-0.758	-0.65	-0.584	-0.18
PEIMS 40	-0.758	1	0.697	0.651	0.24
PEIMS 41	-0.65	0.697	1	0.589	0.227
PEIMS 42	-0.584	0.651	0.589	1	0.246
PEIMS 43	-0.18	0.24	0.227	0.246	1
Test Type	-0.752	0.608	0.466	0.331	0.025
SES	-0.473	0.008	0.014	0.045	0.011

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Table 4.26: Correlation for Reading 2007-2008

		Value	Asymp.	Approx.
		<i>r</i>	Std. Error	Sig.
TAKS	Valid Cases <i>N</i>	33		
	Spearman Correlation	0.488	0.15	0.004
TAKS Accommodated	Valid Cases <i>N</i>	112		
	Spearman Correlation	0.192	0.09	0.042
TAKS Modified	Valid Cases <i>N</i>	106		
	Spearman Correlation	0.396	0.07	.000

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Table 4.27: Correlation Reading 2007-2008

Spearman's rho		Inst. Setting	Pass/Fail	Test Type	SES
Instruc. Setting	Correlation Coeff.	1	-0.099	**0.461	0.01
	Sig. (2 tailed)		0.119	.000	0.93
	N	251	251	251	251
Pass/Fail	Correlation Coeff.	-0.099	1	**0.317	*-.14
	Sig. (2 tailed)	0.119		.000	0.03
	N	251	251	251	251
Test Type	Correlation Coeff.	**0.461	**0.317	1	-0.06
	Sig. (2 tailed)	.000	.000		0.29
	N	251	251	251	251

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

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

Research and Evaluation Department, N.P.I.S.D., 2010

**Table 4.28: Crosstabulation of Instructional Setting and TAKS
Reading Pass/Fail Rates 2009**

Instructional Setting	TAKS Reading 2009					
	<u>Fail</u>		<u>Pass</u>		<u>Total</u>	
	<i>N</i>	%	<i>N</i>	%	N	%
40	3	23.1	10	76.9	13	100
41	2	14.3	12	85.7	14	100
42	0	0	0	0	0	0
43	0	0	0	0	0	0
44	0	0	0	0	0	0
Total	5	18.5	22	81.5	27	100

Research and Evaluation, N.P.I.S.D, 2010

Table 4.29: Crosstabulation of Instructional Setting and TAKS A Reading Pass/Fail Rates 2009

Instructional Setting	TAKS A Reading 2009					
	<u>Fail</u>		<u>Pass</u>		<u>Total</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
40	11	34.4	21	65.6	32	100
41	19	59.4	13	40.6	32	100
42	4	66.7	2	33.3	6	100
43	1	33.3	2	66.7	3	100
44	4	57.1	3	42.9	7	100
Total	39	48.8	41	51.1	80	100

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Table 4.30: Crosstabulation of Instructional Setting and TAKS M Reading Pass/Fail Rates 2009

Instructional Setting	<u>TAKS M Reading 2009</u>					
	<u>Fail</u>		<u>Pass</u>		<u>Total</u>	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
40	4	18.2	18	81.8	22	100
41	10	15.4	55	84.6	65	100
42	6	23.1	20	76.9	26	100
43	1	20	4	80	5	100
44	10	43.5	13	56.5	23	100
Total	31	22	110	78	141	100

Research and Evaluation, N.P.I.S.D, 2010

**Table 4.31: Model Summary and Hosmer-Lemeshow
Reading 2008-2009**

	Chi-Square	df	Sig.
Model Coefficients	27.1	6	.000
Hosmer-Lemeshow Test	5.12	8	0.745

Research and Evaluation Department, N.P.I.S.D., 2010

Spearman Correlation for Reading and SES 2008-2009

	SES
Reading Passing	
Correlation Coefficient	-0.07
Significance (2-tailed)	0.24

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

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

Research and Evaluation Department, N.P.I.S.D., 2010

Table 4.32: Regression Equation for Reading 2008-2009

PEIMS	β	S.E	Chi-Sq	df	Sig	Exp (B)
40	1.05	0.456	5.24	1	0.022	2.84
41	1.46	0.511	8.2	1	0.004	4.32
42	0.642	0.557	1.33	1	0.249	1.9
43	1.38	0.952	2.1	1	0.148	3.97
Test Type	0.747	0.169	19.55	1	.000	2.11
SES	-0.463	0.389	1.42	1	0.234	0.629

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Table 4.33: Correlation Matrix for Reading 2008-2009

	Constant	40	41	42	43
Constant	1	-0.67	-0.65	-0.405	-0.285
PEIMS 40	-0.67	1	0.709	0.53	0.346
PEIMS 41	-0.65	0.709	1	0.59	0.363
PEIMS 42	-0.405	0.53	0.59	1	0.284
PEIMS 43	-0.285	0.346	0.363	0.284	1
Test Type	-0.653	0.337	0.199	0.02	0.123
SES	-0.509	0.047	0.082	-0.003	-0.049

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Table 4.34: Correlations for Reading 2008-2009 by Test

		Value	Asymp. Std. Error	Approx. Sig.
TAKS	Valid Cases <i>N</i>	27		
	Spearman Correlation	0.113	0.19	0.574
TAKS Accommodated	Valid Cases <i>N</i>	80		
	Spearman Correlation	0.201	0.11	0.073
TAKS Modified	Valid Cases <i>N</i>	141		
	Spearman Correlation	0.185	0.089	0.028

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Table 4.35: Correlation for Instructional Setting, Pass/Fail, and Test Type Reading 2008-2009

Spearman's rho		Inst. Setting	Pass/Fail	Test Type	SES
Instruc. Setting	Correlation Coeff.	1	-0.097	**0.289	0.51
	Sig. (2 tailed)		0.126	.000	0.03
	N	251	251	251	251
Pass/Fail	Correlation Coeff.	-0.097	1	**0.246	-0.07
	Sig. (2 tailed)	0.126		.000	0.24
	N	251	251	251	251
Test Type	Correlation Coeff.	**0.289	**0.246	1	0.06
	Sig. (2 tailed)	.000	.000		0.93
	N	248	248	248	248

**Correlation at the 0.01 level

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Table 4.36: Reading and Mathematics Passing Rates

	<u>2007-2008</u>		<u>2008-2009</u>	
	<u>Math</u>	<u>Reading</u>	<u>Math</u>	<u>Reading</u>
TAKS	66.7	78.8	85	81.5
TAKS Accommodated	50.9	52.7	63.3	51.1
TAKS Modified	67.9	67.9	83.3	78

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Table 4.37: Overview of Correlations for PEIMS and Passing Math

	<u>Mathematics</u> <u>2007-2008</u>	<u>Mathematics</u> <u>2008-2009</u>
Spearman Correlation		
Correlation Coefficient = r	*-0.163	*-0.15
Significance = p	0.01	0.02
Hosmer-Lemeshow Test		
Chi-Square	6.62	3.13
Significance = p	.358	.93
Variables in Equation		
Significance = p	<.05 PEIMS 40, 41, 42	<.05 PEIMS 40, 41, 42
	>.05 PEIMS 43	>. 05 PEIMS 43

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

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

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Table 4.38: Overview of Correlations for PEIMS and Reading Pass Rates 2007-2009

	<u>Reading</u> <u>2007-2008</u>	<u>Reading</u> <u>2008-2009</u>
Spearman Correlation		
Correlation Coefficient = r	-0.1	-0.1
Significance = p	0.12	0.13
Hosmer-Lemeshow Test		
Chi-Square	7.81	5.12
Significance = p	0.35	0.75
Variables in Equation		
Significance = p	<.05 PEIMS 40, 41, 42	<.05 PEIMS 40, 41 >. 05 PEIMS 42, 43

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

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Curriculum Vitae

Kathy Black was born in south Texas in 1959 and grew up in El Paso, Texas. She was one of five children born to Rose Marie Black and Allen H. Black. She attended Eastwood High School and graduated in 1977, then went on to the University of Texas at El Paso where she majored in education.

Kathy began her teaching career as a kindergarten teacher in the same school where she had begun her education; Scottsdale Elementary School. In her twenty years as a classroom teacher, she taught kindergarten, second, third, fourth, fifth, sixth, and seventh grades. As the times changed in education, she taught self-contained, departmentalized, multi-age, and looped with several of her classes. In 2005, she left the classroom to become an assistant principal on a K-8 campus. In 2008, she became Director of Curriculum and Instruction for the Special Education Department in the El Paso Independent School District. At the time of this writing, she was serving as Director.

Kathy decided to return to school and joined the Doctoral Program at the University of Texas at El Paso in 2007. In July of 2010 she defended her dissertation. The ability to earn the highest degree possible in her chosen field was a crowning moment in her personal and professional life. She currently lives in El Paso, Texas.

Kathy has two daughters, Megan and Lisa. At the time of this writing, Megan had recently graduated with her bachelor's degree and was preparing to attend law school. Lisa was graduating from Eastwood High School and preparing to attend the University of Texas Austin.

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