The Impact of Teacher Administered Positive Behavioral Support Interventions on the Behavior and Achievement of Intermediate Level Students Identified with Measured Moderate, Mild, and Low Disruptive Externalizing Behaviors

Gregory W. Betts

Follow this and additional works at: http://digitalcommons.unomaha.edu/studentwork

Part of the Educational Administration and Supervision Commons

Recommended Citation
The Impact of Teacher Administered Positive Behavioral Support Interventions on the Behavior and Achievement of Intermediate Level Students Identified with Measured Moderate, Mild, and Low Disruptive Externalizing Behaviors

By
Gregory W. Betts

A DISSERTATION
Presented to the Faculty of
The Graduate College at the University of Nebraska
In Partial Fulfillment of Requirements
For the Degree of Doctor of Education
Major: Educational Administration

Under the Supervision of Dr. John W. Hill
Omaha, Nebraska
December, 2012

Supervisory Committee:
Dr. Peter J. Smith
Dr. Jeanne L. Surface
Dr. Neal F. Grandgenett
Abstract

THE IMPACT OF TEACHER ADMINISTERED POSITIVE BEHAVIORAL SUPPORT INTERVENTIONS ON THE BEHAVIOR AND ACHIEVEMENT OF INTERMEDIATE LEVEL STUDENTS IDENTIFIED WITH MEASURED MODERATE, MILD, AND LOW DISRUPTIVE EXTERNALIZING BEHAVIORS

Gregory W. Betts

University of Nebraska

Advisor: Dr. John W. Hill

Students who demonstrated moderate \((n = 18)\), mild \((n = 22)\), or low \((n = 46)\) externalizing behaviors as rated by teachers on the Universal Behavior Screen at the research school decreased the amount of externalizing behaviors displayed in the research school setting. At posttest 61 students scored in the low range, 24 students scored in the mild range and one student scored in the moderate range demonstrating the effectiveness of the school wide positive behavior support program which focused on a positive proactive reinforcement intervention for all students. While posttest NeSA-Reading scores showed no significant improvement, statistical difference was observed for all students who demonstrated moderate, mild, and low externalizing behaviors following two school years of participation in the school wide positive behavior support program on their Fountas and Pinnell instructional reading level scores. Students with mild and low externalizing behaviors MAZE percentile rank reading comprehension scores were statistically significantly different in the direction of posttest score improvement, however, students with moderate externalizing behaviors MAZE percentile rank reading comprehension scores while not significantly different were in the direction of posttest
score improvement. Over time, the decrease in externalizing behaviors with reading scores staying the same or improving is a positive outcome for the research school. It should be noted that reading deficiencies continue to be areas of concern for at risk students, even with active participation in a school-wide positive behavior support program and best practice reading strategies. Due to this observation the research school will need to assertively continue to implement the school-wide positive behavioral support strategies that empower students and continue best practice reading interventions and strategies to continue to improve reading proficiency and decrease externalizing behaviors.
Acknowledgements

As my journey comes to a close, I look back and understand that this is only the beginning of my commitment to life long learning and my love for education. I would not have thought when graduating from Guthrie Center High School, a small town in central Iowa, that I would be completing a doctoral program and looking to the future to impact education in a positive and supportive manner. I know my path would have ended up differently if it had not been for the great educators I have had in my life from kindergarten to graduate school. I consider myself fortunate to have been presented with opportunities that have increased my exposure to the many intricate components and complexity of education.

First and foremost, my wife Melissa has had unwavering confidence in my abilities to complete the doctoral program with support, patience, and humor especially during the many long nights and days of research and class. My son Parker and daughter Madeline is an inspiration and reminder of my commitment to providing positive environments and excellent school systems that meet the needs of all learners for our future generation. Their determination and positive attitude are a reminder of the importance of positive and effective school systems. My parents have always believed in me more than I have believed in myself. It is from their inspirational commitment to always better oneself and to not make excuses regardless of the situation that has instilled in me a peaceful demeanor to take chances and not let life’s challenges stand in the way.

The dissertation process would not have been an enjoyable learning process if it had not been for the expertise, knowledge, and guidance of my dissertation chair Dr. John W. Hill. I appreciate his willingness to work through the process with humor and
guidance to produce a dissertation with quality research and positive implications for education. There was always light in the dark days of research and writing because of Dr. Hill and I thank him for that. To the other members of my dissertation committee, Dr. Jeanne Surface, Dr. Neal Grandgenett, and Dr. Peter J. Smith, thank you for your time and support during the dissertation process. Other significant University of Nebraska at Omaha faculty members who have given me inspiration and opportunities to learn were Dr. Karen Hayes, Dr. Kay Keiser, and Dr. Richard Christie. Special acknowledgement is given to Mrs. Barbara Mraz, assistant in the office of Educational Administration, for her assistance with editing and welcoming demeanor.

Westside Community Schools has been supportive during my entire postgraduate process. If it were not for the opportunities Westside has provided me through reading interventions and behavior training, I would currently be on a different educational path. Marla Fries (retired), Ruby Larson, and Gary Ohm have been principals who have guided and supported me in my journey to further my education. I appreciate their dedication to education, flexibility and children.
### Table of Contents

Abstract  \(\text{ii}\)

Acknowledgements  \(\text{iv}\)

Table of Contents  \(\text{vi}\)

List of Tables  \(\text{x}\)

#### Chapters

1. Introduction  \(1\)

   - Literature Related to the Study Purpose  \(1\)
   - The Harsh Reality of Dropping out of School  \(2\)
   - Bullying  \(3\)
   - Disruptive Externalizing Behaviors  \(4\)
   - Purpose of the Study  \(5\)
   - Research Questions  \(5\)
   - Importance of the Study  \(16\)
   - Assumptions of the Study  \(16\)
   - Delimitations of the Study  \(17\)
   - Limitations of the Study  \(17\)
   - Definition of Terms  \(17\)
   - Significance of the Study  \(30\)
     - Contribution to research  \(30\)
     - Contribution to practice  \(30\)
     - Contribution to policy  \(30\)
   - Organization of the Study  \(31\)
2. Review of Literature 32

School Wide Positive Behavioral Support Systems 32

Positive Reinforcement 34

Manipulation of positive antecedent stimuli 34

Positive classroom management 36

Behavioral Interventions 39

Student choice-making in the selection of instructional tasks 39

Shaping and fading 40

Token economies 41

Pro-Social Behavior Replacement Intervention 43

Impulse control 44

Identifying feelings 45

Problem solving 45

All Children Experiencing Success Through School Wide Positive Behavior Systems 47

Tier 1 behavioral supports 48

Tier 2 behavioral supports 49

Tier 3 behavioral supports 49

3. Methodology 51

Participants 51

Number of participants 51

Gender of participants 51

Age range of participants 52
Racial and ethnic origin of participants  52
Inclusion criteria for participants  53
Method of participant identification  53

Description of Procedures  53
Research design  53

Independent Variable Conditions  55

Description of Independent Variable  56
District History  56

Need for a school wide positive behavior support program  57
All Children Experiencing Success (ACES) program  58

Dependent Measures  59

Research Questions and Data Analysis  60
Research Question #1  60
Research Question #2  61
Research Question #3  62
Research Question #4  63
Research Question #5  64
Research Question #6  66
Research Question #7  67
Research Question #8  68
Research Question #9  69
Research Question #10  71
Research Question #11  72
4. Results  51

Purpose of the Study  78

Implementation of the Independent Variables 78

Dependent Measures  79

Table #1  80
Table #2  81
Table #3  82

Research Question #1  84
Research Question #2  87
Research Question #3  87
Research Question #4  84
Research Question #5  89
Research Question #6  91
Research Question #7  91
Research Question #8  91
Research Question #9  94
Research Question #10  96
5. Conclusions and Discussion 101

Research Question #1 Conclusion 102
Research Question #2 Conclusion 104
Research Question #3 Conclusion 104
Research Question #4 Conclusion 104
Research Question #5 Conclusion 104
Research Question #6 Conclusion 105
Research Question #7 Conclusion 105
Research Question #8 Conclusion 105
Research Question #9 Conclusion 106
Research Question #10 Conclusion 106
Research Question #11 Conclusion 106
Research Question #12 Conclusion 107
Research Question #13 Conclusion 107

Discussion 107

Implications for practice 109

Implications for policy 110

Implications for further research 110
4. References 112
List of Tables

Table 1. Demographic Information of Moderate Externalizing Behavior Students Identified on the Universal Behavior Screen  80
Table 2. Demographic Information of Mild Externalizing Behavior Students Identified on the Universal Behavior Screen  81
Table 3. Demographic Information of Low Externalizing Behavior Students Identified on the Universal Behavior Screen  82
Table 4. Results of Chi-Square Pretest Compared to Posttest Change Frequencies for Intermediate Level Third-Grade, Fourth-Grade, and Fifth-Grade Students Identified With Moderate, Mild, and Low Externalizing Behaviors Who Participated in the Required Aces Program Total Universal Behavior Screen Subtests for (a) Stealing, (b) Lying, Cheating, Sneaking, (c) Behavior Problems, (d) Peer Rejection, (e) Low Academic Achievement, (f) Negative Attitude, and (g) Aggressive Behavior  86
Table 5. Pretest Compared to Posttest NeSA-Reading Performance Level Scores for Students with Moderate, Mild, and Low Externalizing Behaviors  87
Table 6. Results of Analysis of Variance Posttest Compared to Posttest NeSA-Reading Performance Level Scores for Students with Moderate, Mild, and Low Externalizing Behaviors  90
Table 7. Pretest Compared to Posttest Fountas and Pinnell Instructional Reading Level Scores for Students with Moderate, Mild, and Low Externalizing Behaviors  93
Table 8. Results of Analysis of Variance Posttest Compared to Posttest Fountas and Pinnell Instructional Reading Level Scores for Students with Moderate, Mild, and Low Externalizing Behaviors  96

Table 9. Pretest Compared to Posttest MAZE Percentile Reading Comprehension Level Scores for Students With Moderate, Mild, And Low Externalizing Behaviors  98

Table 10. Results of Analysis of Variance Posttest Compared to Posttest MAZE Percentile Reading Comprehension Level Scores for Students with Moderate, Mild, and Low Externalizing Behaviors  100
CHAPTER ONE

Introduction

The United States is a continuously changing country placing great expectations and demands on every school system now facing a continuously changing student demographic with an emerging influx of new generations, ethnicities, races, and increasing socio economic need. Furthermore, now only 66% of children live with two married parents, which has decreased from 77% in 1980 (Key national indicators of well-being (NLTS), 2011), of the 3 million children who do not live with a parent 54% live with Grandparents, 21% live with other relatives, and 24% live with non relatives (NLTS, 2011). Moreover, 23% of school aged children have at least one foreign–born parent compared to 15% in 1994 and 6% of children live in a home where English is not a primary language (NLTS, 2011). Educators today also are providing 8.7 million students fourth-grade through 12th-grade with additional differentiated reading and writing instruction (Marzano, 2007) in order to prevent student escape responding (Lavender & Hill, 2010) and increase graduation rates (NIL, 2007). Shockingly, during 2010, a full 9% of youth ages 16-19 years were not enrolled in school and therefore were at greatest risk for not completing high school (NLTS, 2011). Of greatest concern for students not in school is the increase in violent crimes committed by these juveniles between the ages of 12 to 17 years (NLTS, 2011). Students not in school are also more likely to engage in substance abuse, including alcohol and drugs, live unhealthy life styles leading to obesity and malnourishment, have children outside of marriage, and remain unemployed living a life of poverty (NLTS, 2011). Students with negative behavior problems in school are more likely to receive an office referral--an unfortunate early predictor of later interaction
with a juvenile system (Fowler, 2011). Educators are struggling with ways to provide enriched environments for all students that will keep them in school nourishing their hearts, minds, and physical wellbeing (NLTS, 2011).

The U.S. is faced with many challenges that have to be addressed in schools before significant student learning can occur. Educators have the challenge of establishing and continuing high standards for learning while meeting the growing challenges students bring with them to school even when the resources to effectively address these issues may be lacking (Arum, 2011; Norris, 2010).

**The Harsh Reality of Dropping Out of School**

Fifty-eight percent of students with emotional or behavioral disorders drop out of school. Seventy-three percent of the students who drop out are arrested in the first two years after leaving school. Of the 58% of students who drop out, 68% are unemployed by the fifth year of dropping out while girls identified with behavioral disorders are eight times more likely than peers to get pregnant during their teenage years (U.S. Department of Education (SEELS), 2005). Furthermore, to make matters worse inevitable contact with the juvenile justice system almost guarantees that a student will not complete high school (Fowler, 2011). These staggering numbers represent a critical population that need extra support during school years to combat the urge to leave school early for the real world. Dropping out of school is a life-altering event that is most highly related to academic status (Verdugo, 2011). Many variables contribute to dropping out of school but minority males from lower socioeconomic homes seem most vulnerable (McNeal Jr., 2011). Rodriguez (2010) also reports other factors for students that contribute to early school leaving including dropping school culture, level of expectations, and lack of
relationships with adults (Rodriguez, 2010). Students who drop out have fewer employment options than students who graduate from high school. Furthermore, dropouts who are able to find employment will have smaller paychecks than their peers who completed high school students who graduate and the jobs will require less skill than jobs graduates receive (Martin, Tobin, & Sugai, 2002). Jimerson, Reschly, and Hess (2008) confirm by their research that school dropouts are an increasing concern for our society and will cost the United States billions.

**Bullying**

Bullying is a common known element faced with children and adults for centuries past and the current 21st Century. Bullying occurs when there is an imbalance of power between two individuals and one individual has been targeted without provocation (Olweus, 2003). Olweus (2003) also asserts that boys are more likely to bully than girls and boys are more often a target/victim of bullying (Arum, 2011). Two common victims of bullying are a passive victim occupying 85% of victims and 15% are victims who are aggressive and bring on the bullying themselves (Olweus, 2003). Students who struggle academically reported more bullying than their counterparts (U.S. Department of Education (NCES), 2001). Students who are targets/victims of bullying are more likely to carry a weapon (for protection) and be involved in physical altercations (NCES, 2001). Forms of bullying are cyber bullying (using technology e.g. email, texting, Facebook), relational bullying (using the need for or current relationships), verbal bullying (using words), and physical bullying. Felix and Furlong (2008) assert that bullying behavior clearly interferes with positive classroom interaction and learning, social relationships, and especially positive school climate. In the main, students who bully are themselves
most likely to have been victims of abuse or violence and therefore are most in need of clear, consistent, and positive adult interaction and intervention.

**Disruptive Externalizing Behaviors**

Students with challenging and threatening moderate, mild, and low disruptive externalizing behaviors are at higher risk for not receiving a meaningful education as a direct result of their behavior (Durand, Hieneman, Clarke, & Zona, 2009). Dunlap and Fox (2009) reinforce this thinking by stating that challenging behaviors can interfere with social-emotional and intellectual development, can continue beyond early years of childhood, and will resist intervention that can last for periods into adulthood. In addition, administrators, teachers, and parents often feel overwhelmed by students challenging and threatening externalizing behaviors with 39% of high school teachers reporting negative behaviors interfering with instruction (Arum, 2011; Crone & Horner, 2003). While students with externalizing behavior challenges comprise only 1% to 5% of enrollment in a typical school they account for on average 50% of office referrals, have a lower grade point average, are absent an average of 18 school days in a given year, and 50% of these students are likely to be arrested one year after graduating high school (SEELS, 2005). This observation coincides with the reported concern that parents have for the lack of discipline in schools due to challenging behaviors (Bergman, Powers, & Pullen, 2010).

Unfortunately, many in today’s educational systems may ascribe students’ disruptive problems solely to causes outside of school rather than taking a step back to see if the school environment is contributing to the challenging behavior, or more importantly working to develop positive interventions and support systems that can work
to alter the negative life course of students with disruptive externalizing behaviors (Crone & Horner, 2003). According to Crone and Horner (2003) frustrated educators keep delivering the same punishments that are ineffective—including punitive discipline and alternative placement—believing if these are administered often enough that the challenging disruptive behavior will subside. With the needs of students increasing so educators must become skilled in the delivery of positive behavioral support for all students in a caring nurturing environment regardless of external contributing causes.

**Purpose of Study**

The purpose of this study is to determine the impact of teacher administered positive behavioral support interventions on the behavior and achievement of intermediate level students identified with measured moderate, mild, and low disruptive externalizing behaviors.

**Research Questions**

Research question one will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate, mild, and low externalizing behaviors who participated in the required All Children Experience Success ACES program pretest compared to posttest total change frequency behavior data.

**Overarching Pretest-Posttest Behavior Research Question #1.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate, mild, and low externalizing behaviors who participated in the required ACES program beginning third quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by total change frequency Universal Behavior Screen subtests for (a) stealing,
(b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative attitude, and (g) aggressive behavior frequencies?

Research question two will analyze intermediate level third-grade and fourth-grade students identified with moderate externalizing behaviors who participated in the required ACES program pretest compared to posttest data Nebraska State Reading Assessment.

**Overarching Pretest-Posttest Nebraska State Reading Assessment Research Question Research Question #2.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning fourth quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?

**Sub-Question 2a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program beginning fourth quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?

Research question three will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in
the required ACES program pretest compared to posttest data Nebraska State Reading Assessment.

**Overarching Pretest-Posttest Nebraska State Reading Assessment Research**

**Question Research Question #3.** Do intermediate third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning fourth quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?

**Sub-Question 3a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program beginning fourth quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?

Research question four will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program pretest compared to posttest data Nebraska State Reading Assessment.

**Overarching Pretest-Posttest Nebraska State Reading Assessment Research**

**Question Research Question #4.** Do intermediate third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning fourth quarter first
year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?

**Sub-Question 4a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program beginning fourth quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?

Research question five will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate, mild, and low externalizing behaviors who participated in the required ACES program posttest compared to posttest Nebraska State Reading Assessment data.

**Overarching Posttest-Posttest Nebraska State Reading Assessment Research Question #5.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors compared to intermediate level third-grade and fourth-grade students identified with low externalizing behaviors who participated in the required ACES program have fourth quarter end of second year of participation as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?

**Sub-Question 5a.** Will there be a difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing
behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors compared to intermediate level third-grade and fourth-grade students identified with low externalizing behaviors who participated in the required ACES program have fourth quarter end of second year of participation as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?

Research question six will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required All Children Experience Success (ACES) program pretest compared to posttest instructional reading data.

**Overarching Pretest-Posttest Reading Research Question #6.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter of year one of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by subtest for reading performance as measured by the Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level?

**Sub-Question 6a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter of year one of participation pretest compared to their beginning fourth quarter end of second year of participation posttest
instructional reading level as measured by subtests for Fountas & Pinnell Benchmark Assessment System (2008) scores measured by (a) instructional reading level?

Research question seven will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required All Children Experience Success (ACES) program pretest compared to posttest instructional reading data.

**Overarching Pretest-Posttest Reading Research Question #7.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter of year one of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by subtest for reading performance as measured by the Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level?

**Sub-Question 7a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter of year one of participation pretest compared to their beginning fourth quarter end of second year of participation posttest instructional reading level as measured by subtests for Fountas & Pinnell Benchmark Assessment System (2008) scores measured by (a) instructional reading level?

Research question eight will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in
the required All Children Experience Success (ACES) program pretest compared to posttest instructional reading data.

**Overarching Pretest-Posttest Reading Research Question #8.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter of year one of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by subtest for reading performance as measured by the Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level?

**Sub-Question 8a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter of year one of participation pretest compared to their beginning fourth quarter end of second year of participation posttest instructional reading level as measured by subtests for Fountas & Pinnell Benchmark Assessment System (20008) scores measured by (a) instructional reading level?

Research question nine will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate, mild, and low externalizing behaviors who participated in the required All Children Experience Success (ACES) program compared to posttest instructional reading data.

**Overarching Posttest-Posttest Nebraska State Reading Assessment Research Question #9.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors compared to intermediate level third-
grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors compared to intermediate level intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program have end of second year fourth quarter of participation posttest Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level?

Sub-Question 9a. Will there be a difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program have end of second year fourth quarter of participation posttest Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level?

Research question ten will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program pre-test compared to post-test data Maze comprehension reading test.

Overarching Pretest-Posttest Maze Comprehension Reading Test Research Question Research Question #10. Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second
year of participation posttest data as measured by Maze comprehension reading test as measured by the fourth quarter of year two (a) comprehension?

**Sub-Question 10a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension?

Research question eleven will analyze intermediate level third-grade and fourth-grade students identified with mild externalizing behaviors who participated in the required ACES program pre-test compared to post-test data Maze comprehension reading test.

**Overarching Pretest-Posttest Maze Comprehension Reading Test Research Question Research Question #11.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension?

**Sub-Question 11a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program lose, maintain,
or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension?

Research question twelve will analyze intermediate level third-grade and fourth-grade students identified with low externalizing behaviors who participated in the required ACES program pre-test compared to post-test data Maze comprehension reading test.

**Overarching Pretest-Posttest Maze Comprehension Reading Test Research**

**Research Question #12.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension?

**Sub-Question 12a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension?
Research question thirteen will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors compared to intermediate level third-grade and fourth-grade students identified with low externalizing behaviors who participated in the required ACES program post-test compared to post-test Maze comprehension reading data.

**Overarching Posttest-Posttest Maze Comprehension Reading Research**

**Question #13** Will there be a difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program have end of second year fourth quarter of participation Maze comprehension test as measured by the fourth quarter of year two (a) comprehension?

**Sub-Question 13a.** Will there be a difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program have end of second year fourth quarter of participation posttest Maze comprehension test scored for (a) comprehension?
Importance of the Study

This study has the potential to contribute to research, practice, and policy. It is of significant interest to teachers, school district administrators, local and state Board’s of education, Education Service Units, and all educational professionals and service providers who are seeking ways to help students demonstrate successful behaviors and achieve academic success in school.

Assumptions of the Study

This study has several strong features including: (a) explicitly differentiated instruction was based on best practices teaching theory, (b) explicitly differentiated reading instruction was based on best practices teaching theory and assessment, (c) school wide positive behavior support program was implemented by all staff members and received appropriate training, (d) the positive behavior support program directly addressed a clear concern for meeting the needs of students academically and behaviorally, (e) the positive behavior support program directly addressed a clear concern for meeting and supporting the needs of teacher knowledge to support the intervention, (f) all subjects in the study were enrolled in the same school district and elementary for two consecutive years for the duration of the intervention, (g) the study subjects who were selected for moderate and mild externalizing behaviors were identified as in need from the Universal Behavior Screen, (h) the study subjects selected for low externalizing behaviors were randomly selected from the Universal Behavior Screen, (i) all students were assessed using routinely administered district and state-approved norm-referenced standardized tests and district-approved classroom grading practices.
Delimitations of the Study

This study was delimited to students third-grade, fourth-grade, and fifth-grade students entering Westgate Elementary for the school year 2009 through 2011 who were identified as having moderate, mild, and low externalizing behaviors from the Universal Behavior Screen and were members of Westgate Elementary for Westside Community Schools. Study findings will be limited to the students who completed two consecutive years at Westgate Elementary. All students participated in the positive behavioral support program and had the same principal, counselor, and school psychologist.

Limitations of the Study

The study was confined to the students who were identified as third-grade, fourth-grade, and fifth-grade students entering Westgate Elementary for the school year 2009 through 2011 who were identified as having moderate, mild, and low externalizing behaviors from the Universal Behavior Screen. Study participants consist of moderate externalizing behavior students \((n = 19)\), mild externalizing behaviors \((n = 22)\), and low externalizing behavior students \((n = 59)\) who participated in the positive behavior support program at Westgate Elementary for the 2009/2010 school year through the 2010/2011 school year. The limited sample size, students who did not complete two consecutive years or were placed in an alternative program may limit the utility and generalizability of the study results and findings.

Definition of Terms

Active participation. Active participation means students actively respond using overt or covert behavior. Active Participation must be congruent to the objective (Cummings, 2002).
**All Children Experiencing Success (ACES).** All Children Experiencing Success is a positive behavior support program to support all students in achieving academic excellence as well as the social and emotional skills necessary to achieve success.

**Assess fidelity of implementation.** Assess fidelity of implementation means deciding the usefulness of accuracy and timeliness for all data based decisions are dependent upon the data recording monitoring procedures are implemented with validity and accurately. (Chafouleas, et al., 2007).

**Antecedent.** Antecedent means an event that occurs immediately preceding or previously that determines a later behavior or skill (Dowd & Tierney, 1992). Any life occurrence that induces a challenging behavior or desired behavior (Dulap & Fox, 2009).

**Assessment.** Assessment mean gathering information or data that confirms what consistently the student can demonstrate, partially demonstrate, or is unable to demonstrate (Fountas & Pinnell, 2011).

**Baseline.** A baseline is a measurement of an identified behavior’s occurrence prior to a new intervention being implemented (Dowd & Tierney, 1992).

**Behaviors.** Behaviors are observable acts demonstrated by an individual that are observable and demonstrated as part of a larger measure of activity (Dowd & Tierney, 1992).

**Behaviorism.** Behaviorism is the early school of psychology that adopted the nurture side of the nature verses nurture debate. Behaviorists are in favor of the influence of the environment on mental process and overt behavior and contribute development of life experiences (Sdorow, 1998).
**Behavior contracts.** Behavior contracts are contingencies implemented for reinforcement into a written document that is signed by all invested parties and agreed upon that will invoke consequences or rewards (Jenson, Rhode, & Reavis, 1994).

**Behavior management.** Behavior management is established control over the behavior of an individual or individuals for the purpose of achieving a desired outcome or producing a behavior change (Dejnozka & Kapel, 1982).

**Behavior rating scales.** Behavior rating scales are assessments that rate a student's behavior based on a set of pre-designed questions on previous student actions with the understanding the individual rating will have sufficient knowledge to provide accurate information on the rating about the student’s behavior (Chafouleas, et al., 2007).

**Blooms Taxonomy.** Blooms Taxonomy is a classification of cognitive objectives into six levels and serves as a guide in defining standards, diagnosing student behaviors, and planning activities to extend student thinking (Cummings, 2002).

**Boys Town Model.** Boys town model means delivering and teaching of a consistent structured life approach to positively changing the individuals life skills, making good choices, and building relationships (Dowd & Tierney, 1992).

**Bullying.** Bullying is intentional and typically repeated behavior targeting another person or group. It involves an imbalance of power and causes physical and/or psychological discomfort or harm.

**Cheating.** Cheating is providing answers on tests and homework that are not your own.
**Check in/check out.** Check in/check out means a student check in with an appointed adult in the morning to start the day off with a positive note and then checks out with the same adult to evaluate the student’s progress during the school day.

**Class pass.** Class pass means a student(s) using the class pass are allowed at designated times to take a break. They are allowed to go to a designated room in the building or perform a previous discussed activity for a pre-determined set of time.

**Classroom management.** Classroom management is organizing students, space, time, materials, practices, and procedures in a classroom to maintain an environment in which instruction and learning can occur (Wong &Wong, 2009).

**Comprehension.** Comprehension means the interpretation of experience; relating new information to what is already known; asking cognitive questions and being able to find answers to them; a state, the absence of confusion. (Smith, 1994)

**Constructivism.** Constructivism means the method of how individuals come to understanding about their world and through making meaning by experiences (Brooks & Brooks, 1993).

**Contextual fit.** Contextual fit means the increase of validity between the desired behavior(s) on the behavior support plan and the values, skills, resources, and routines of the people who will carry out the plan (Crone & Horner, 2003)

**Curriculum based measurement (CBM).** Curriculum based measurement means a generalized assessment approach for performance of all students in a particular academic subject or social context to monitor student performance and to provide comparison, proficiency and differentiation on a given subject for student learning (Chafouleas, et al., 2007).
**Diagnosis.** Diagnosis provides in-depth information about student skills and needs providing a comprehensive picture of student behavior performance strengths and weaknesses (Chafoules, et al., 2007).

**Direct behavior ratings.** Direct behavior ratings means formative assessment designed to characterize behavior that occurs over a specified period of time (Chafoules, et al., 2007).

**Discipline (Love and Logic).** Discipline means a belief of disciplining with a child rather than to a child (Fay & Funk, 1995).

**Duration.** Duration means total time, percent of time or average timer per identified event (Chafoules, et al., 2007).

**Environment.** Environment means the conditions, forces, and external stimuli that impinge upon the individual. These may be physical, social, as well as intellectual forces and conditions (Bloom, 1964).

**Evaluation assessment.** Evaluation assessment provides a general summary of student skills on district- or state-mandated year-end testing. Information obtained reveals student knowledge and is not generally used for day-to-day student instruction (Chafoules, et al., 2007).

**Externalizing behavior.** Externalizing behavior means a behavior that is external and can be observed.

**Evidence based.** Evidence based means the quality of evidence established a strong evidence of effectiveness: Randomized controlled trials that are well designed and implemented.
**Expectation.** Expectation means what an individual will believe or will not believe to happen or believing what you can or cannot achieve (Wong & Wong, 2010).

**Fading.** Fading means “the gradual removal of prompts to allow the S^D to occasion a response independently” (Alberto & Troutman, 2006).

**Feasibility of assessment.** Feasibility of assessment refers to the consideration of time needed to train a person to accurately use the assessment tool, intrusiveness of using the tool in the required setting, time, and scheduling for data collection, complexity of using the tool (Chafouleas, et al., 2007, p 131).

**Fluency in reading.** Fluency in reading means reading continuously with good momentum, phrasing, appropriate pausing, intonation, and stress (Fountas & Pinnell, 2011, p. 7).


**Frequency.** Frequency means the number of events in a period of time (Chafouleas, et al., 2007).

**Functional behavioral assessment.** Functional behavioral assessment is an assessment method of obtaining relevant information that predict and maintain a problem behavior in specific events (Crone & Horner, 2003).

**Good behavior games.** Good behavior games are classroom interventions used to promote desired behavior from an expected audience using competition.
**Guided reading level.** Guided reading levels means leveled text to meet the ability of the students reading level.

**Hereditarianism.** Hereditarianism means a belief in the nature side of nature verses nurture debate and the importance of heredity (Sdorow, 1998).

**Instructional reading level.** Instructional reading level means the instructional reading level is usually determined from books (or other material), which the child can read with no more than one word-recognition error in approximately 20 words. The comprehension score should be 75% or more. At this level, the child reads orally, after silent study, without tension. Silent reading is faster than oral reading. The student is able to use word-recognition clues and techniques. He reads with teacher help and guidance. This is the "stretch" level. With the right materials and purposeful reading, he makes maximum progress. Franz, Vivian, Ph.D.


**Latency.** Latency means the time allotted for a specific behavior to begin after prompt or antecedent cue provided (Chafouleas, et al., 2007).

**Low academic achievement.** Low academic achievement refers to students who perform below accepted grade level standards and indicators.

**Low externalizing behaviors.** Low externalizing behaviors means students who exhibit low externalizing behaviors and rate out at five or under on the Universal Behavior Screen.

**Lying.** Lying means not telling the truth.

**MAZE comprehension reading assessment.** The MAZE comprehension reading assessment is a multiple-choice close task that students complete while reading
silently. The first sentence of a 150-400 word passage is left intact. Thereafter, every 7th word is replaced with three words inside parenthesis. One of the words is the exact one from the original passage. Science-based research has shown that this provides a reliable and valid measure of reading comprehension http://www.aimsweb.com/measures-2/maze-cbm/

**Mentor.** Mentor means an adult who is identified in the building to be a mentor for students. Mentors meet with the identified students periodically to offer guidance, assist with problems, provide the student with a safe place to vent, and deliver praise and compliments.

**Mild externalizing behaviors.** Mild externalizing behaviors means students who exhibit some externalizing behaviors and score between six and 10 on the Universal Behavior Screen.

**Moderate externalizing behaviors.** Moderate externalizing behaviors are students who exhibit noticeably more externalizing behaviors than their peers and score 11 or above on the Universal Behavior Screen.

**Motivation.** Motivation refers to the focus, attention, or persistence of student behavior and is determined by the student’s expectations to be successful on the task and the perceived value of the task with pertaining variable; emotion, success, knowledge of results, interest, level of concern, feeling tone, and intrinsic and extrinsic factors (Cummings, 2002, p. 20).

**Naturally formed group.** Naturally formed group means a population of individuals formed naturally without randomization or choosing of individuals.
Nebraska State Accountability-Reading (NeSA-R). Nebraska State Accountability is a system of criterion-referenced tests. Nebraska teachers have developed NeSA items, and Data Recognition Corporation has served as the test support vendor. The online administration is delivered by Computerized Assessments and Learning (CAL). Online test administration is supported through training tools, tutorials, and practice experiences. http://nesa.caltesting.org/about.html

Negative expectations/attitude. Negative expectations/attitude means a belief that what is tried will result in failure (Wong & Wong, 2010).

Operational definition. Operational definition means a problem behavior describes behavior in observable, measurable terms. The description of the behavior should be so explicit that two observers could independently observe a behavior and agree whether or not the behavior occurred (Crone & Horner, 2003 p.153).

Operant Conditioning. Operant conditioning means learned behavior of individuals to obtain desired consequences in their environment (Sdorow, 1998).

Peer rejection. Peer rejection is a group of peers who reject an individual usually of the same age or developmental level.

Physical maturation. Physical maturation means a timeline of natural progressions in an individual (as in the progression from crawling to standing to walking) (Sdorow, 1998).

Positive expectations. Positive expectations are a belief that what an individual does or expects will have a positive result (Wong & Wong, 2010).
**Positive behavior support.** Positive behavior support means a set of strategies that are designed to improve behavioral success by employing non-punitive, proactive, systematic techniques that are exercised consistently over time (Sprick, 2009 p. 54).

**Positive reinforcement.** Positive reinforcement is “the presentation of a stimulus immediately following a behavior, resulting in an increase of the future probability of that behavior” (Scott, Anderson, Mancil, & Peter 2011, p. 428).

**Premack principle.** Premack principle was named after David Premack (1965), and means a behavior that has a higher probability of occurrence can be used as a positive reinforcer for a behavior that has a lower probability (Sdorow, 1998).

**Progress monitoring.** Progress monitoring means collecting information/data over time of a frequent behavior on a repeated basis to determine if progress indicates that the individual’s goals will or are being met (Chafouleas, et al., 2007).

**Pro-social skills.** Pro-social skills are social skills that are taught to instill social skills for success in society.

**Rate.** Rate means the number of events per unit of time (et al., & Sugai, 2007).

**Response to intervention (RTI).** Response to intervention is a researched-based early intervention program designed to catch struggling students before they fall behind and to ensure that initially struggling students build effective strategies and processes to be successful (Lyons & Pinnell, 2001).

**Schema.** Schema means a cognitive structure or mental model that organizes and incorporates knowledge and characteristics of particular person, objects, events, or situations an object that affects the encoding, storage, and retrieval of information related to it (Sdorow, 1998 p. G-9)
**School-based behavioral assessment.** School-based behavioral assessment means “a process for using data to identify and solve a problem…involving both effective and efficient data-based decision making.” “involving an understanding of why it is being done and how the data will be used, and also acknowledging the need to direct attention toward efficient use of resources for collecting and using assessment data,” “Problem solving model,” (Chafouleas, et al., 2007).

**School home note.** School home note is an informational note that goes from the classroom to home, and back to school. It provides information between the parents and teacher about a student’s classroom behavior and/or academic performance (Jenson, Rhode & Reavis, 1994).

**School dropout.** School dropout refers to an individual who fails to complete high school has not enrolled in or completed an educational equivalency program (Jimerson, Reschly, & Hess, 2008).

**School wide positive behavior support (SWPBS).** School wide positive behavior support means an emphasis on the prevention of behavior problems by establishing a consistent delivery of positive behavior support practices and provides a useful way to organize thinking about possible levels of assessment (Chafouleas, et al., 2007).

**Screening assessments.** Screening assessments are used to identify students considered at risk for difficulty in a particular area who would benefit from the addition of or change to an intervention. Significant discrepancies are often predictive of future problems or risks, and early interventions are usually indicated (Chafouleas, et al., 2007).
Self monitoring. Self-monitoring is a process in which the student observes and collects data on his/her own behavior. Monitoring one’s own behavior is an important part of self-management (Jenson, Rhode, & Reavis, 1994).

Setting events. Setting events are “Circumstances in an individual’s life, ranging from cultural influences to an uncomfortable environment that temporarily alter the power of reinforcers” (Alberto & Trautman, 2006, p.423).

Shaping. Shaping means “Teaching new behaviors through differential reinforcement of successive approximations to a specified target behavior” (Alberto & Troutman, 2006).

Skills. Skills mean a set of related behaviors or components that are designed to produce positive results used in defined situations (Dowd & Tierney, 1992).

Sneaking. Sneaking is the act of demonstrating a behavior to circumvent the rules and expected behavior.

Social economic status. Social economic status puts individuals into categories based on their reported income.

Standards based grading. Standards based grading means achievement marks given to students communicating proficiency level of school district standards and benchmarks in a specific content area.

Standards based report card. Standards based report card is a communication to parents and students on the achievement that represent proficiency of district standards and benchmarks in a specific content area in conjunction with standards based grading.

Stealing. Stealing means taking an item that does not belong to the person.
**Student assistance team (SAT).** Student assistance team is a team of qualified educators to review evidence of students referred by teacher(s) for support and intervention recommendations.

**Standards based report card.** A standards based report card is used to identify students’ achievement representing proficiency of each standard in a specific content area.

**Summative.** Summative means an assessment/evaluation designed to provide feedback to be used in making judgments about a student’s achievement at the end of a given period of instruction (O’Connor, 2002).

**Standardized test.** Standardized test means an examination that has been normed against a given population (Jenson, Rhode, & Reavis, 1994).

**Systematic direct observation.** Systematic direct observation means allowing an observer to take a snapshot in time of a student’s behavior along with the entire environment over a defined time period (Chafouleas, et al., 2007).

**Token economy.** Token economy means a distribution and trade-in of tokens for displays of appropriate social behaviors (Chafouleas, et al., 2007).

**Universal Behavior Screen.** Universal behavior screen means a survey assessment performed by educators (most likely the classroom teacher) to rate specific external and internal behaviors.

**Victim.** Victim means an individual who is exposed or targeted for bullying (Olweus, 2003).
Significance of the Study

This study has the potential to contribute to research, practice, and policy. It is of significant interest to teachers, school district administrators, local and state Board’s of education, Education Service Units, and all educational professionals and service providers who are seeking ways to help students demonstrate successful behaviors and achieve academic success in school. By understanding the results of this study, school districts are able to determine the appropriateness of continuing, adjusting, and/or expanding positive behavior support programs for all students.

Contribution to research. There is research that suggests the importance of having a positive behavior support program in place for all students to be successful in school in terms of behavior and academics. However, specific suggestions for how to incorporate a successful behavior support program will vary. The results of this study, may inform theoretical and practical literature on the effectiveness of the practices and strategies used in this positive behavior support program. In addition, the findings may indicate specific factors for increasing student academic achievement.

Contribution to practice. Based on the outcomes of this study, the school and the district may decide whether to continue or adjust the program.

Contribution to policy. If results show the positive implications for students who participated in the positive behavior support program, a discussion should ensue regarding how to ensure the continuation of such program and how to best continue validity in data collection and implementation.
Organization of the Study

The literature review relevant to this study is presented in Chapter 2. This chapter reviews professional literature on positive behavior support programs, behavior interventions, functional behavior assessment, positive school culture, classroom management, essential elements of instruction, Love and Logic discipline. Chapter 3 describes the research design, methodology, and procedures that will be used to gather and analyze the data of the students.
CHAPTER TWO

Literature Review

School Wide Positive Behavioral Support Systems

School wide positive behavioral support systems utilize positive behavioral support strategies (O’Neill, Horner, Albin, Storey, & Sprague, 1990; Meyer & Evans, 1989) avoiding interventions that are aversive and intrusive using instead functional assessment (O’Neill, et al., 1990) to identify student externalizing acting out characteristics for prevention and instructional intervention. These interventions are utilized because curriculum and day-to-day group learning activities for behaviorally acting out youth has typically been characterized by high levels of external control (Knitzer, Steinberg, & Fleisch, 1990) and standard assignments have been interpreted by Clarke and colleagues (1995) as "aversive stimuli that generated disruptive behavior as escape responding through the operations of negative reinforcement (p. 235).” Students with externalizing acting out behaviors have historically been placed in special classes or separate school programs (Martin, Lloyd, Kauffman, & Coyne, 1995) receive instruction in social skills, self-evaluation, self-control (Cosden, Gannon, & Haring, 1995; Kern, Wacker, Mace, Falk, Dunlap, & Kromery, 1995), and academics (Hill & Coufal, 2005; Hill, Esser, & Weidner, 1998), within these school placements. Best practices for these interventions are based primarily on manipulation of positive antecedent stimuli, which historically incorporated elements of preference (Foster-Johnson, Ferro, & Dunlap, 1994) and provision for student choice-making in the selection of instructional tasks (Dunlap, dePerczel, Clark, Wilson, Wright, & Gomez, 1994) in order to promote adaptive behavior change. School wide positive behavior systems are being implemented to help students
remain in the classroom instead of being removed from the classroom for special placements or special education.

Positive behavioral support strategies are based on behavior replacement paradigms that emphasize incompatible alternatives or “fair pairs.” Interval and ratio administration of point awards for desirable behavior and point fines for undesirable behavior is utilized strategically to strengthen the positive behaviors emitted by even the most troubling youth. Fair pairs are established when two behaviors cannot occur at the same time. A student cannot talk and be silent at the same time, look a person in the eye and out the window, have hands to self and be touching someone, or be writing or not writing at the same moment in time.

Intervention goals for students with externalizing acting out behaviors include: (a) controlling behavioral excesses such as noncompliance and aggression, (b) remediating academic skill deficits, (c) remediating social skill deficits, (d) teaching internal guides to behavior replacement (Jones, Downing, Latkowski, Ferre, & McMahon, 1992), and (e) preventing crime (Sherman et al., 1997). Intervention procedures (interventions) used to accomplish these goals (Bauer, Shea, & Keppler, 1986) commonly incorporate positive reinforcement (Jones, Mandler-Provin, Latkowski, & McMahon, 1987), manipulating antecedents (Alberto & Troutman, 2006), shaping, (Bauer et al., 1986), and fading (LaNunziata, Hunt, & Cooper, 1984), combine token economies with hierarchies of self-management (Algozzine, 1990) behavior expectations or levels (et al., Weidner, 1997), and often include social skills, goal setting, and behavior replacement curricula (ACES, 2010). Behavioral expectations and rewards change as students demonstrate progress. Students who progress through intervention programs have more privileges while
receiving fewer external rewards in increasingly less restrictive educational settings (Smith & Farrell, 1993).

Positive reinforcement. Positive reinforcement is essential in modifying undesirable behavior to desirable behaviors. Positive reinforcement occurs immediately when the desired behavior is demonstrated (Scott et al., 2011). Providing positive reinforcement immediately will increase the likelihood of the positive behavior occurring again in the future. Reinforces for the positive behavior can be delivered differently when the positive behavior occurs such as verbal praise, non-verbal recognition, tokens, and name recognition in a weekly newsletter. The more occurrences or interactions the student has with positive reinforcement the more likely the student will understand the function of the positive behavior. This is extremely effective when strategies are supported through a school-wide positive behavior system. The goal is for the student to experience success and have the intensity of the positive reinforcement decrease over time (Scott et al., 2011).

Manipulation of positive antecedent stimuli. Manipulating antecedents is important to modifying negative behavior and eliciting positive behavior from a student. When determining antecedents for possible negative behaviors, schools need to look at a positive school environment, a well-managed classroom, and environmental factors outside of the student’s regular school day. One of the most important ways to effect, improve, and maintain a positive school climate is to have a deliberate School Wide Positive Behavior Supports of preventive discipline procedures (Bergman et al., 2010). In a positive school climate, students and adults who enter the building have an inviting feeling where students and adults are valued and respected. School staff, maintain high
standards and establish organization where students understand routines and know what is expected of them (Bergman et al., 2010). “To support teaching and maximize achievement, schools must maintain learning environments that foster effective self-management, promote supportive and proactive social relations, and maximize academic and instructional engagement. A proactive learning environment also helps prevent the development of antisocial aggressive behavior (Chafouleas et al., 2007, p. 11).” The most important day in a child’s educational career is the first day of school not graduation day. This day will set the precedent for a positive school experience starts the moment the child walks in the school building door and experiences the school climate (Wong & Wong, 2009).

Consistent with this research projects school wide positive behavior support strategies, and Tier 1 interventions, is the opportunity to build positive relationships between students and staff in a positive school climate. Students are able to view adults in the building as caring individuals when they receive positive praise for good behavior associated with positive attention. It is essential with the beginning of Tier 1 interventions are positively established in the school. “School disciplinary climates are the organizational context in which education functions and authority relationships between students and educators are embedded (Arum, 2011, p. 9).” Positive school environments can remove negative stimuli that can be antecedents for a student to display a negative behavior.

Educators must make important decisions everyday and many decisions lead to impacting a positive school climate to manipulate possible positive antecedents. Teachers must always keep the dignity of a child intact and view them through the lens of
respect. Seeing a child’s potential and learning about the child’s learning style will create satisfied learners, help the child feel respected and contribute to a positive school culture (Senge, 2000).

**Positive classroom management.** Having a well-managed classroom is important in controlling positive antecedent stimuli and begins with a classroom management plan that is implemented with consistency and validity. Regardless of the quality of the curriculum and the behavior plan, without classroom management it will be difficult to attain student compliance in addition to student achievement.

The ability to deliver and understand the intricate elements of instruction and modifying antecedents qualifies the educator to be a quality teacher. The educator must understand how to manage their classroom rather than discipline it (Wong & Wong, 2009). Disorganization of the teacher will lead to chaos and a poor learning environment for the students and possible negative antecedents. Organization of students, space, time, and materials (Wong & Wong, 2009) is essential to student learning and a well-managed classroom. An effective educator will have these components scripted, model the expectations, understand the organization of space and furniture and how it impacts the students, and use time efficiently especially if an environmental factor is a negative antecedent for a student. Consistency is essential for all students and even more so for students with behavior challenges. Students will understand their expectation in their task-oriented and predictable environment (Wong & Wong, 2009). The elements to a classroom management plan must be taught repeatedly during the first two weeks of school for an effective school year (Wong & Wong, 2009) and possibly daily to weekly for a student with negative behavior difficulties. After the initial implementation, the
teacher is responsible for consistency in praise and holding students to the plan. Scheduled management lessons should be scheduled during the course of the year to eliminate student excuses.

Effective educators arrange a classroom that is easy to maneuver in and consider wall space, the teachers desk, student desks, student work centers and all other furniture to allow teacher proximity with little difficulty, and students are able to see the teacher during direct instruction. Teacher proximity can eliminate undesirable behaviors for students who are monitored and held accountable. A student who becomes easily distracted when sitting for long periods of time may be placed at the back of a classroom to allow for standing and extra movement. This manipulation of the environment can lead to positive setting events for students in need and eliminate negative antecedents. Maximizing the demands of time to maneuver the classroom will create organization and the best use of time and reduce behavior problems (Wong & Wong, 2009). Time on-task can be maximized when students have a seating chart, the teacher greets the student at the door to establish a positive tone for the day, daily activities are scripted, and students are required to practice expectations when they fail to follow them allowing for predicable consequences.

A classroom management plan incorporates all the elements of quality teaching and management that is easily predictable by the students and planned by the teacher. Teachers must use professional judgment on when to change the plan and how it is monitored. Daily plans are essential to being thought out and planned to reduce the chance disruption during the day. Effective educators have a purpose for everything that occurs in a classroom that has the direct result of student learning. Planning before the
year begins on rules and procedures, teaching the expectations on the first day, holding students accountable for the expectations and teaching and communicating the plan often is a foundational framework for effective classroom management (Duke, 1982). Educators must remember to teach the expectations systematically as if it were a subject and have the expertise of the essential elements of instruction (Duke, 1982).

After the basic structure of the class is determined, other factors can be controlled to reduce undesirable behavior characteristics from a student. Students come to schools experiencing events outside of school that can alter their behavior during the school day. When educators understand a student elicits negative behavior due to hunger, food can be provided to positively alter the negative antecedent. A student who does not receive enough sleep may need a higher ratio of positive to negative comments to help them through the day (Alberto & Troutman, 2006). A student, who demonstrates a negative behavior when there is a substitute, can possibly have an alternate setting to work during the day removing the amount of time with the negative stimuli. When educators are aware of setting events beyond their control, educators can work on controlling events within their control (Alberto & Trautman, 2006). It is important to identify the negative antecedent and provide an alternate or modified replacement of the behavior or antecedent. This understanding of setting events along with a positive school climate, and a well-managed classroom will provide the best opportunity to manipulate positive antecedent stimuli during the school day and give the best environment possible for student success.
Behavioral Interventions

Student choice-making in the selection of instructional tasks. Manipulating instructional antecedents during the beginning stages of academic tasks can have a positive effect on performance and compliance and effectively reduce students’ refusal to work, arguing, out of seat, and talking out behaviors. For example, students can be presented with alternatives of their choice during instruction for active participation in the task reducing distractions to themselves and others. A student with a low reading level can become discouraged during independent work time. A student can be presented with a choice on how to complete the task. The choices may be to listen to the text through headphones, complete fewer tasks, use an alternate text at the student’s reading level, work with a peer, or have an alternate setting to receive assistance in completing the task. A student who is working at or above grade level may demonstrate behaviors due to a desire to have more challenging assignments and activities. After instruction, a student can have the choice to finish the assignment, receive a modified assignment, or work on the presented indicator with a more challenging assignment. A student who is working at grade level but demonstrates a refusal behavior during work completion can have a menu of choices to finish the task. A student may choose to finish the task in an alternate setting, receive reward time when finishing the task, or may choose to have structured breaks after completing a set amount of problems or tasks. Students can also create a list of options that will contribute to learning during the lesson. These choices can be manipulating a small item in their hand, sitting in a more comfortable chair, having the ability to stand during instruction, or simply sitting on a pillow while at their seat. The goal is to provide the student with what they need to have to actively participate in the
lesson and to demonstrate learning. To achieve this goal, a student may need to have choices in the selection of instructional tasks to complete required direction.

**Shaping and fading.** Shaping and fading is an important concept in which the student responds quickly to directions given by the teacher. Instructional control is more quickly established by engaging the student in preferred activities. Shaping will occur with frequent and successive reinforcement of the new behavior (Alberto & Troutman, 2006). To establish instructional control, the teacher must first “pair” the task with positive reinforcers and then model the desired behavior (Alberto & Troutman, 2006). Next, the teacher will intentionally establish any prompts the student will need to be successful. Prompts can be verbal directions for lining up, getting out materials, and following simple directions (Alberto & Troutman, 2006). Other prompts can be visual when pointing to a picture describing the appropriate behavior, a color or number chart in a room to describe the appropriate voice level, or other picture prompts on a bulletin board (Alberto & Trautman, 2006). Physical prompting is appropriate when previous verbal or visual prompts have failed or were inappropriate. Physical prompting can be a touch on the shoulder, appropriate physical touch in guiding the student through the desired behavior, or other motor behaviors. For example, a student may use a small silent buzzer that vibrates (Alberto & Troutman, 2006) when the student has been sitting for too long and may take an at-desk scheduled break. After the teacher has established modeling and prompts, the teacher will pair the desired behavior with a reinforcer like positive praise or tokens. At first, the teacher should freely, without demand give praise to the student at every possible moment the student demonstrates the desired behavior. This reinforcement establishes a desired positive interaction with the student for demonstrating
the appropriate behavior. After the behavior has been demonstrated and learned by the
student, reinforcers will continue to be given to the student when the desired behavior is
demonstrated. Over time, the teacher will start to gradually fade any prompting to have
the desired behavior occur (Alberto & Troutman, 2006). It is essential not to fade to
quickly or slowly in fear of terminating the learned behavior.

Decreasing assistance is the first way to release control to the student. The
amount of prompting slowly reduces as the competency of the student increases. Time
delay is another form of fading where the prompt is initially still given but the timing of
the prompt changes (Alberto & Troutman, 2006). Instead of prompting a student right
away, the teacher may start to wait a few seconds before given the prompt. Time delay
can also be physical where the teacher starts to increase time before pointing to visual
prompts or having to point to a cue card on a child’s desk.

It is important in fading to understand the importance of providing the correct
time period for the fading process to occur. As a child demonstrates the correct behavior
on a more consistent basis, fewer prompts and rewards can be given. It is the goal of
shaping and fading to provide intensive intervention in the beginning and fade to few or
no prompts and rewards to instill self-motivation to complete the desired behavior.
Reinforcers should be given to the student especially at first when the student
demonstrates the behavior without a prompt. Over time, reinforcers are also faded in the
same consistency as with the prompts.

**Token economies.** Teaching the social skills in context (Chafouleas et al., 2007)
will allow students to understand when to use an appropriate social skill in the acceptable
setting and can be reinforced in a token economy. There is a delicate balance of rewards,
consequences, and norms that should be established to develop internalization of the expectation by the student (Bergman, Powers & Pullen, 2010). In a token economy teachers will distribute and trade-in tokens for displays of appropriate social behaviors (Chafouleas et al., 2007; Dowd & Tierney, 1992). Tokens can resemble anything that is tangible and given to the student when they display an appropriate behavior. It is important to be specific when praising the child of the behavior that was demonstrated (Bergman et al., 2010) before delivering the token. Students will collect the tokens and trade the tokens in for rewards or privileges. The behavior support team will establish a theme for the token economy and rewards and privileges the students can earn when they redeem the collected tokens. When positive or desired behaviors are reinforced over time, the traits of the desired behavior will increase while the undesirable behavior will decrease (Dowd & Tierney, 1992; Bergman et al., 2010). Praise that is genuine (Bergman et al., 2010) will allow students to respond to the SWPBS and reinforce the expectations and positive climate of the school.

Robert Marzano and associates researched with positive evidence and support reinforcing effort and providing recognition to students. The students must associate a connection and difference between effort and achievement for themselves. Educators must establish the difference for students and reinforce the appropriate actions. Teachers must identify when it is appropriate to reward a student’s effort in obtaining a set goal and in a token economy when rewards are given for attaining a set goal rather than randomization. This will enhance a students intrinsic motivation. Marzano’s research also proved that tangible rewards were effective in motivating students’ behaviors but specific verbal praise was the most effective (Marzano, Pickering, & Pollock, 2001).
Pro-Social Behavior Replacement Intervention

Individual pro-social skills can be taught to an individual who may not be able to demonstrate appropriate social skills in correct social and learning settings (Dowd & Tierney, 1992). Essential steps to social skills are defining the desired outcome, knowing critical components of the desired behavior, clarifying the elements of the behavior in observable terms, and finally using a progression of the elements of the behavior in a specific learning or real life order (Dowd & Tierney, 1992). Pro-social skills are fundamental for success of students inside and outside of the classroom. Students must be competent at delivering appropriate social skills and also be able to identify cues from their environment and others in order to make appropriate decisions (Dowd & Tierney, 1992). Students must develop the skills of conflict-resolution (Bergman, Powers, & Pullen, 2010) to be effective problem solvers.

Personal growth behavior replacement skill programs often include instruction in impulse control, identifying feelings, and problem solving. Impulse control steps such as, (a) stop and think, and (b) keeping your cool, give youths cognitive alternatives to aggression and violence when they have angry feelings. Through role-playing and real-world practice youth realize that while they may feel angry and feel like hitting someone but they do not have to act on those feelings. These impulse control steps are made more meaningful when youth incorporate their own elements of creative expression. All behaviors have a function and they are presented when a change in the environment needs to occur (Tyrone, Hall, & Hill, 1998).

An individualized approach to behavior replacement is done in a one-to-one setting with the child or adolescent and a teacher. A therapeutic alliance is developed,
permitting the teacher to help the youth learn more about self and learn more successful approaches for handling stress, conflict, and life. Behavior models of therapy help the individual to understand his feelings, thoughts, and behaviors. Efforts are made to reflect back to recent, previous, and early childhood experiences to understand how and why the person has had problems. The child or adolescent is encouraged to understand and then to modify reactions to stress and life situations and to develop more successful models. Behavioral models of therapy are more today oriented and focus on the individual learning behavioral patterns and the results of these behaviors. More successful reactions are taught.

In a group model, the individual might meet on a regular basis in a group of six to eight other youths and a teacher. This group model might be psychodynamically oriented or behaviorally oriented. The goal of this approach is to help the individual learn more about interpersonal relationships and better models of interacting with peers and with adults.

**Impulse control.** Self-control is an important realization in terms of impulse control. “Self-control conflicts begin with impulses initiated by the presence of temptations in one’s environment” (Fujita & Han, 2009, p. 799). Dealing with impulse control, a student must come to understand the reason for their actions when they are labeled impulsive. Intrinsic and extrinsic motivations are a key component for a student dealing with impulsivity. Intrinsic motivation is related when a student demonstrates certain behaviors because it makes them feel good, it is enjoyable, or because the experience of the act is internally rewarding. External motivation occurs when the student will receive an external reward for a specific behavior. In the heat of the
moment, a student may act violently because internally, it makes them feel safe, strong, and independent. The same event can be described as extrinsic because the reward is not feeling good about their behavior, instead the attention they are given for their behavior. Impulse control does not stand-alone but is an integral part of social skills, understanding the environment along with the above mentioned. To become less impulsive, students must be able to first identify their feelings through problem solving and be able to carry out future socially acceptable actions.

**Identifying feelings.** Identifying feelings is an important concept students must learn to be proactive problem solvers. When students are upset, they can be reactive to their negative feelings and release their anger through negative actions because it is the only way the student has dealt with solving their angry feelings. In the research school students use a five-point Likert scale to identify how they are feeling (Buron & Curtis, 2003) where the number one is congruent with the feeling words for happy or comfortable, two is consistent with the word okay, three means frustrated or confused, four represents the feelings angry, mad, or upset, and five would be used by a student feeling furious or wanting to shutdown. Students have faces on the Likert scale that express visually their feelings next to each number that would represent their feelings.

**Problem solving.** Student problem solving can be an important factor in helping all students learn from their own experiences and develop internal conflict resolution. Problem solving is essential if students are going to learn how to solve problems on their own without adult intervention. To learn problem solving techniques, students must have adults model the steps in solving problems or conflict before applying the skills on their own. Collaborative Problem Solving (CPS) is a philosophy where students and adults
work together to help solve the child’s problem (Greene, 2011). In a CPS intervention, the lagging skills of the child are identified and worked through with an adult and in some situations using a scripted conversation. One model of CPS asks questions of the child after an initial empathy statement that requires the child to reflect and think about why a certain problem occurred, the definition of the problem, how to solve the problem, and what to do next time. Problem solving is not a onetime fix but should be looked at proactively instead of in the heat of the moment (Greene, 2011).

The Love and Logic approach developed by Jim Fay and David Funk (1995) allows the adult to develop skills that allow them to interact with children while being happier and more empowered. This approach allows the child to accept responsibility for their actions, behave appropriately even when provoked, and respond in a responsible way. Through Love and Logic children learn to use a rich array of behavioral choices and responses to difficult situations that serve as an antidote to emotional reactivity. Love and Logic teaches the student to think about their choice and the consequence that will result if they use skills rather than emotion. The Love and Logic approach allows students to take the time to cool down before a teacher discusses their behavior and other choices they could have made that would have resulted in a better outcome. When options of appropriate choices and discussions are given instead of demands, power struggles between the adult and child will be limited. Adults cannot expect to use orders and threats to achieve a desired behavior. Love and Logic lets students know that making it through a difficult decision or situation is always an option—a delicate balance between internalized control and externalized enforcement (Fay & Funk, 1995). The language and philosophy of Love and Logic is compatible with School Wide Positive Behavior
Supports that promote intrinsic decision-making and empathy. Greene (2011) asserts the importance of children helping to solve their own problems and having an invested interest in using empathy statements to initiate the problem solving process ultimately leading to students’ long lasting other centered value systems.

**All Children Experiencing Success Through School Wide Positive Behavior Systems**

While violence and aggression to peers, adults, and property are all too often the dramatic reasons for referral to more restrictive placements and participation in intervention programs, individualized interventions for youth with externalizing acting out behaviors capitalize on the capacity of these youth to produce desirable behaviors and engage in pro-social skill replacement activities--this is the essence of behavior replacement paradigms. Behavioral programs balance administration of behavior accelerative and behavior reductive procedures once stimulus control has been established. All Children Experiencing Success (ACES) is a school wide positive behavior support system that encompasses all of the components of a SWPBS for the benefit of student success. A continuum of positive behavior supports in a SWPBS program would require a tiered intervention approach that would encompass required actions by staff for all students referred to as a three-tiered pyramid of behavioral supports (Chafouleas et al., 2007). The intent is to continue to increase and teach desired behaviors while decreasing undesirable behaviors that interfere with learning for all students. School wide positive behavior support systems (SWPBS) are developed and implemented to establish a positive approach to discipline, management, and the development of pro-social skills for students in our educational systems. Establishing a SWPBS program and belief system is essential to the buy-in of all staff and students and
the creation of a strong, solid response to intervention (RTI) that resembles the beliefs of
the school district, staff, and students. The SWPBS is essential in identifying behaviors
that are acceptable, teach alternate behaviors, and reinforce good behavior rather than
focus on punitive consequences (Fowler, 2011). Establishing overarching behavior
expectations that are clear, simple, easy to understand, and focused further support a safe,
respectable, and responsible school wide core belief system (Bergman et al., 2010;
Westside Community Schools District, 2010). The goal is always to reduce punishment
and create a positive student self-regulated school environment (Chafouleas et al., 2007).

**Tier 1 behavioral supports.** In the three-tiered pyramid model Tier 1 behavioral
supports are provided to all students (Chafouleas et al., 2007). Tier 1 behavioral supports
are intended to establish academic and positive social development for all students
(Gresham, 2004). Teachers provide students with pro-social skills, classroom
management, effective instruction, school wide expectations, expectations of the
SWPBS, good behavior games, and a token economy while establishing communication
with parents. According to researchers, 75% to 90% of all students will respond to Tier 1
behavioral supports (Chafouleas et al., 2007; Browning-Wright & Cook, 2011; Crone &
Horner, 2003). Depending on the level and number of behavior challenges, this
percentage may be higher or lower than what is reported (Gresham, 2004). Furthermore,
Tier 1 positive behaviors are meant to be proactive proving students with ways to behave-
_called replacement behaviors--that are incompatible with undesirable behaviors. All
students receive the same amount of Tier 1 positive behavior instruction (Gresham,
2004).
**Tier 2 behavioral supports.** Tier 2 behavioral supports are established for students who do not respond to Tier 1 behavioral supports and require a greater diversity of intervention. According to researchers, 10% to 25% of students will be identified as needing Tier 2 behavioral supports and would therefore be considered students at-risk (Chafouleas et al., 2007; Browning-Wright & Cook, 2011; Crone & Horner, 2003). Tier 2 interventions are to be used only after teacher instruction and management incompetence are ruled out as the source of student misbehavior. Tier 2 behavioral supports while delivered in smaller group settings are based upon behavior rating scales administered to determine the intensity, frequency, and duration of a student’s specific disruptive behaviors and to further identify potential reinforcers that may be used to strengthen incompatible positive replacement behavioral alternatives to disruptive behaviors. Once students are placed on a behavior support plan, through data collection, students have the opportunity by improving their behavior to graduate from the behavior support plan back to Tier 1 behavioral supports intended to establish academic and positive social development for all students (Gresham, 2004).

**Tier 3 behavioral supports.** Tier 3 behavioral supports are implemented for students who do not respond to Tier 1 or Tier 2 interventions and require more restrictive placements. According to researchers, 3% to 5% of students will be identified in this category (Chafouleas et al., 2007; Browning-Wright & Cook, 2011; Crone & Horner, 2003). Students who are identified as possible Tier 3 students will need an intensive team-developed behavior plan intended to decrease the intensity, frequency, and duration of students violent and aggressive behavior and implement acceptable replacement
behaviors through intensive intervention. Students requiring Tier 3 behavioral supports and more restrictive placements were not subjects in this study.
CHAPTER THREE

Methodology

The purpose of this study is to determine the impact of teacher administered positive behavioral support interventions on the behavior and achievement of intermediate level students identified with moderate, mild, and low externalizing behaviors.

Participants

Individuals who participated in this study were identified during the 2010 winter Universal Behavior Screen of their third-grade through fifth-grade school year, as having moderate, mild, or low externalizing behavior summative scores by classroom teachers’ observations for (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative attitude, and (g) aggressive behavior frequencies. Individuals who participated in this study attended the same elementary for two consecutive years.

Number of participants. The maximum accrual for this study will be $N = 86$. Study participants will consist of third-grade through fifth-grade students identified with moderate externalizing behavior frequencies $n = 18$ (21%), mild externalizing behavior frequencies $n = 22$ (26%), and low externalizing behavior frequencies $n = 46$ (53%) who participated in the All Children Experiencing Success (ACES) positive behavior support program for all elementary students.

Gender of participants. The gender of the 2009 through 2011 group of students that participated in the ACES program identified with moderate externalizing behavior frequencies was girls $n = 3$ (3%), boys $n = 15$ (17%), mild externalizing behavior
frequencies was girls $n = 11$ (11%), boys $n = 11$ (11%), and low externalizing behavior frequencies was girls $n = 32$ (37%), boys $n = 14$ (16%). All students completed the ACES positive behavior support program. The gender of the study participants was congruent with the research school districts gender demographics for third-grade through fifth-grade students identified on the Universal Behavior Screen.

**Age range of participants.** The age range of the students in the three externalizing behavior groups was nine years to 13 years of age. All students completed two consecutive years participating in the ACES program. The age range of the study participants was congruent with the research school districts age-range demographics for students in the third-grade to fifth-grade.

**Racial and ethnic origin of participants.** The ethnic origin of the students who participated in the ACES program identified with moderate externalizing behavior frequencies in 2010 through 2011 were White, $n = 11$ (61%), Black $n = 6$ (33%), Hispanic, $n = 1$ (5%). The ethnic origin of the students who participated in the ACES program identified with mild externalizing behavior frequencies in 2010 through 2011 were White, $n = 11$ (50%), Black $n = 6$ (27%), Hispanic, $n = 4$ (18%), and Indian, $n = 1$ (5%). The ethnic origin of the students who participated in the ACES program identified with low externalizing behavior frequencies in 2010 through 2011 were White, $n = 29$ (63%), Black $n = 12$ (26%), Hispanic, $n = 3$ (7%), Middle Eastern, $n = 1$ (2%) and Indian, $n = 1$ (2%). The racial and ethnic origin of the study participants is congruent with the research school districts racial and ethnic origin demographics for third-grade through fifth-grade students.
Inclusion criteria of participants. Study participants consisted of third-grade through fifth-grade students who participated in the ACES behavioral support program identified with moderate, mild, and low externalizing behavior frequencies in the winter of the 2009/2010 school year through spring of the 2010/2011 school year. Students were identified during the 2010 winter Universal Behavior Screen of their third-grade through fifth-grade school year, as having moderate \(n = 18\), mild \(n = 22\), or low \(n = 46\) externalizing behavior summative scores by their classroom teachers. Students qualifying for and receiving special education services for behavior while participating in the ACES program were not included in the research sample unit of analysis because these students also were receiving additional interventions required to meet the goals of their Individual Educational Plans.

Method of participant identification. Reasons for identification were identified during the 2010 research school district’s winter Universal Behavior Screen of their third-grade through fifth-grade school year, as having moderate, mild, and low externalizing behavior summative scores by their classroom teachers included: (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative attitude, and (g) aggressive behavior. No individual identifiers were attached to the achievement, engagement, or behavioral data of the 86 participating students in the three groups.

Description of Procedures

Research design. The pretest-posttest three-group comparative efficacy study design is displayed in the following notation.

Group 1 X₁ O₁ Y₁ O₂
Group 2 X₁ O₁ Y₂ O₂

Group 3 X₁ O₁ Y₃ O₂

**Group 1 = study participants #1.** Naturally formed group of intermediate level students third-grade through sixth-grade (n = 18).

**Group 2 = study participants #2.** Naturally formed group of intermediate level students third-grade through sixth-grade (n = 22).

**Group 3 = study participants #3.** Naturally formed group of intermediate level students third-grade through sixth-grade (n = 46).

**X₁ = study constant.** All intermediate level student participants were enrolled in the same research school for two consecutive years 2010-2011 following Universal Behavior Screen assessment indicating the need for moderate, mild, and low behavioral support for externalizing behavior.

**Y₁ = Study independent variable, moderate externalizing behavior positive support strategy, condition #1.** Intermediate level students identified with moderate externalizing behaviors who participated in Tier 1 plus Tier 2 teacher administered positive behavioral support interventions.

**Y₂ = Study independent variable, mild externalizing behavior positive support strategy, condition #2.** Intermediate level students identified with mild externalizing behaviors who participated in Tier 1 plus Tier 2 teacher administered positive behavioral support interventions.

**Y₃ = Study independent variable, low externalizing behavior positive support strategy, condition #3.** Intermediate level students identified with low externalizing
behaviors who participated in Tier 1 only teacher administered positive behavioral support interventions.

**O₁ = study pretest dependent measures.** (1) Externalizing behavior conditions as measured by the beginning of the third quarter of year one Universal Behavior Screen domain scores for (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative attitude, and (g) aggressive behavior. (2) Achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading. (3) Reading performance as measured by the first quarter of year one Fountas & Pinnell Benchmark Assessment System scores for (a) instructional guided reading level. (4) Maze comprehension reading test performance as measured by the first quarter of year one (a) comprehension.

**O₂ = study posttest dependent measures.** (1) Externalizing behavior conditions as measured by the end of the fourth quarter of year two Universal Behavior Screen domain scores for (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative attitude, and (g) aggressive behavior. (2) Reading achievement as measured by the fourth quarter of year two (a) Nebraska State Assessment-Reading. (3) Reading performance as measured by the fourth quarter of year two Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional guided reading level. (4) Maze comprehension reading test performance as measured by the fourth quarter of year two (a) comprehension.

**Independent Variable Conditions**

The study has one independent variable with three conditions. Independent variable, externalizing behavior, condition #1 was a naturally formed group of
intermediate level students third-grade through fifth-grade with moderate externalizing behaviors who participated in teacher administered positive behavioral support interventions. Independent variable, externalizing behavior, condition #2 was a naturally formed group of intermediate level students third-grade through fifth-grade with mild externalizing behaviors who participated in teacher administered positive behavioral support interventions. Independent variable, externalizing behavior, condition #3 was a naturally formed group of intermediate level students third-grade through fifth-grade with low externalizing behaviors who participated in teacher administered positive behavioral support interventions. Universal Behavior Screen externalizing behavior summative scores by their classroom teachers determined the placement of students into the moderate, mild, and low categories for the positive behavior support program.

**Description of Independent Variable**

**District history.** An award winning public school district in the heart of Omaha, Nebraska, Westside Community Schools has dedicated itself to excellence for 64 years. District 66 is currently serving over 6,000 students and is comprised of Westside High School, an alternative high school, a middle school serving seventh-grade through eighth-grade, and ten elementary schools. The elementary buildings house two toddler programs, six pre-school programs, and two full-day four-year-old programs that meet five-days-a-week. High academic expectations for teachers are evident in the research school district where 65% have earned advanced degrees. Students beginning in the eighth-grade participate in a one-to-one laptop computer program based on the school district’s continuing focus on technology in education for all students. Excellence in Youth programs can be found at all levels as well as extra curricular activities and clubs.
Westside Community Schools strives for excellence as graduating seniors continue to score above the state and national averages on their ACT and SAT tests. The school board continues to provide support for the districts staff, programs, and infrastructure. This is evident in the continuance in an elementary foreign language, sixth grade pre-algebra, fifth and sixth grade strings program, Professional Learning Communities at all levels, new athletic complexes and a new performing arts center at Westside High School and middle school. In the fall of 2011, Westside Community Schools opened the first early childhood building in the district that will begin enrolling toddlers at 18 months of age and this is a compliment to the early childhood centers that operate within the elementary school building.

**Need for a school wide positive behavior support program.** During the research school district’s 64 year history student demographics have changed significantly, moving from a predominately majority white, English speaking, economically advantaged, two parent intact family base to a more racially and economically diverse population of students today based on past option enrollment and now open enrollment programs available to students across a two county learning community.

Based on teacher surveys, talking to board members, phone calls that were being received from parents at the administration building, and more significant behaviors in kindergarten and first-grade, a decision was made to implement a positive behavior support program. School leaders and teachers decided to pursue a joint initiative between special education and elementary schools implementing a proactive approach to meeting the pro-social behavioral needs of students and improve the teaching and behavior
support skills of all district faculty and staff. The proactive approach chosen was a positive behavior support (PBS) system called All Children Experiencing Success (ACES) to reinforce and acknowledge desired behavior and intervention practices for maintaining or changing behavior. At this same point in time, the federal government passed the American and Reinvestment Act of 2009 (ARRA). ARRA money was intended to save and create jobs along with improving “student achievement through school improvement and reform”. Under Principles b.3, it is stated as “Making improvements in teacher effectiveness and in the equitable distribution of qualified teachers for all students, particularly students who are most in need.” ACES in combination with ARRA funds has provided opportunities to implement new programs that have supported teachers and improved student behavior.

**All Children Experiencing Success (ACES) program.** The ACES program was introduced to Westside Community Schools during the fall of 2009. Westside Community Schools mission for ACES is (In order to meet the unique needs of all learners, Westside Community Schools Supports all students in achieving academic excellence as well as the social and emotional skills necessary to achieve success). Diana Browning-Wright and Clayton R. Cook, Ph.D., conducted six full day training sessions over two years, to selected faculty members from the district’s pre-school, elementary, and middle school buildings. The teachers were selected for participation by their building principles using a rubric to identify potential ACES leaders. In order to be chosen for ACES training teachers were required to have a minimum of three years of teaching experience, be willing to stay in the school for at least two school years following ACES training, and commit themselves to attend all six, full day training
sessions agreeing to implement required assignments and make presentations to their building personnel (trainer of trainer model). Administrators and faculty signed contracts demonstrating their commitment to the ACES initiative with the previously mentioned requirements explained on the contract.

The ACES program outlined a plan to reinforce positive behaviors for all students and target students who would be identified as in need of behavior supports. The six-step plan included reviewing (1) the problem with behavior intervention the “old way”, (2) linking behavioral and academic difficulties, (3) utilizing behavior response to intervention as the “new and improved way,” (4) insuring consistent universal behavior screening and progress monitoring, (5) Creating a menu of evidence-based interventions, and (6) being mindful of real world applications. The ACES program focuses on using the six steps to intervene with students of need proactively instead of waiting for the student to fail and then provide remedial intervention.

**Dependent Measures**

The study’s four dependent variables are (1) pretest posttest and posttest-posttest externalizing behavior conditions as measured by the end of the fourth quarter of year two Universal Behavior Screen domain scores for (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative attitude, and (g) aggressive behavior. (2) Pretest posttest and posttest-posttest reading achievement as measured by the fourth quarter of year two (a) Nebraska State Assessment-Reading. (3) Pretest posttest and posttest-posttest reading performance as measured by the fourth quarter of year two Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level. (4) Pretest posttest and posttest-
posttest reading achievement as measured by the fourth quarter of year two (a) comprehension.

**Research Questions and Data Analysis**

Research question one will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate, mild, and low externalizing behaviors who participated in the required All Children Experience Success ACES program pretest compared to posttest total change frequency behavior data.

**Overarching Pretest-Posttest Behavior Research Question #1.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate, mild, and low externalizing behaviors who participated in the required ACES program beginning third quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by total change frequency Universal Behavior Screen subtests for (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative attitude, and (g) aggressive behavior frequencies?

**Analysis.** Research Question #1 will be analyzed utilizing a Log-linear analysis for an AxBxC contingency table representing the 2-way interactions for AB, AC, and BC, respectively for pretest compared to posttest change frequencies for intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate, mild, and low externalizing behaviors who participated in the required ACES program total Universal Behavior Screen subtests for (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative
attitude, and (g) aggressive behavior. A .01 alpha level will be employed to help control for Type 1 errors. Frequencies and percentages will be displayed in tables.

Research question two will analyze intermediate level third-grade and fourth-grade students identified with moderate externalizing behaviors who participated in the required ACES program pretest compared to posttest data Nebraska State Reading Assessment.

**Overarching Pretest-Posttest Nebraska State Reading Assessment Research Question #2.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning fourth quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?

**Sub-Question 2a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program beginning fourth quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?

**Analysis.** Research Sub-Questions #2a will be analyzed using a dependent t test to examine the significance of the difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors
who participated in the required ACES program beginning fourth quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading. Because multiple statistical tests will be conducted, a one-tailed .01 alpha level will be employed to help control for Type 1 errors. Means and standard deviations will be displayed on tables.

Research question three will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program pretest compared to posttest data Nebraska State Reading Assessment.

**Overarching Pretest-Posttest Nebraska State Reading Assessment Research Question Research Question #3.** Do intermediate third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning fourth quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?

**Sub-Question 3a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program beginning fourth quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?
**Analysis.** Research Sub-Questions #3a will be analyzed using a dependent *t* test to examine the significance of the difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program beginning third quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading. Because multiple statistical tests will be conducted, a one-tailed .01 alpha level will be employed to help control for Type 1 errors. Means and standard deviations will be displayed on tables.

Research question four will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program pretest compared to posttest data Nebraska State Reading Assessment.

**Overarching Pretest-Posttest Nebraska State Reading Assessment Research Question Research Question #4.** Do intermediate third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning fourth quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?

**Sub-Question 4a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program beginning fourth
quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading?

**Analysis.** Research Sub-Questions #4a will be analyzed using a dependent t test to examine the significance of the difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program beginning fourth quarter first year of participation pretest compared to their beginning third quarter end of second year of participation posttest behavior as measured by achievement as measured by the fourth quarter of year one (a) Nebraska State Assessment-Reading. Because multiple statistical tests will be conducted, a one-tailed .01 alpha level will be employed to help control for Type 1 errors. Means and standard deviations will be displayed on tables.

Research question five will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate, mild, and low externalizing behaviors who participated in the required ACES program posttest compared to posttest Nebraska State Reading Assessment data.

**Overarching Posttest-Posttest Nebraska State Reading Assessment Research Question #5.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors compared to intermediate level third-grade and fourth-grade students identified with low externalizing behaviors who participated in the required ACES program have fourth
quarter end of second year of participation as measured by achievement as measured by
the fourth quarter of year one (a) Nebraska State Assessment-Reading?

**Sub-Question 5a.** Will there be a difference between intermediate level
third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing
behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade
students identified with mild externalizing behaviors compared to intermediate level
third-grade and fourth-grade students identified with low externalizing behaviors who
participated in the required ACES program have fourth quarter end of second year of
participation as measured by achievement as measured by the fourth quarter of year one
(a) Nebraska State Assessment-Reading?

**Analysis.** Research Sub-Questions #5a will be analyzed using a single
classification Analysis of Variance (ANOVA) to determine the main effect congruence or
difference between intermediate level third-grade, fourth-grade, and fifth-grade students
identified with moderate externalizing behaviors compared to intermediate level third-
grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors
compared to intermediate level third-grade and fourth-grade students identified with low
externalizing behaviors who participated in the required ACES program third quarter end
of second year one of participation posttest behavior as measured by the fourth quarter of
year two (a) Nebraska State Assessment-Reading. An $F$ ratio will be calculated and an
alpha level of .05 will be utilized to test the null hypothesis. Independent $t$ tests will be
utilized for contrast analysis if a statistically significant $F$ ratio is observed. Means and
standard deviations will be displayed in tables.
Research question six will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required All Children Experience Success (ACES) program pretest compared to posttest instructional reading data.

**Overarching Pretest-Posttest Reading Research Question #6.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter of year one of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by subtest for reading performance as measured by the Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level?

**Sub-Question 6a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter of year one of participation pretest compared to their beginning fourth quarter end of second year of participation posttest instructional reading level as measured by subtests for Fountas & Pinnell Benchmark Assessment System (2008) scores measured by (a) instructional reading level?

**Analysis.** Research Sub-Questions #6a will be analyzed using a dependent t test to examine the significance of the difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of
participation posttest behavior as measured by the Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level. Because multiple statistical tests will be conducted, a one-tailed .01 alpha level will be employed to help control for Type 1 errors. Means and standard deviations will be displayed on tables.

Research question seven will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required All Children Experience Success (ACES) program pretest compared to posttest instructional reading data.

**Overarching Pretest-Posttest Reading Research Question #7.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter of year one of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by subtest for reading performance as measured by the Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level?

**Sub-Question 7a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter of year one of participation pretest compared to their beginning fourth quarter end of second year of participation posttest instructional reading level as measured by subtests for Fountas & Pinnell Benchmark Assessment System (2008) scores measured by (a) instructional reading level?
Analysis. Research Sub-Questions #7a will be analyzed using a dependent \( t \) test to examine the significance of the difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by the Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level. Because multiple statistical tests will be conducted, a one-tailed .01 alpha level will be employed to help control for Type 1 errors. Means and standard deviations will be displayed on tables.

Research question eight will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required All Children Experience Success (ACES) program pretest compared to posttest instructional reading data.

**Overarching Pretest-Posttest Reading Research Question #8.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter of year one of participation pretest compared to their beginning fourth quarter end of second year of participation posttest behavior as measured by subtest for reading performance as measured by the Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level?

**Sub-Question 8a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program lose, maintain,
or improve, their beginning first quarter of year one of participation pretest compared to
their beginning fourth quarter end of second year of participation posttest instructional
reading level as measured by subtests for Fountas & Pinnell Benchmark Assessment
System (2008) scores measured by (a) instructional reading level?

**Analysis.** Research Sub-Questions #8a will be analyzed using a dependent *t* test
to examine the significance of the difference between intermediate level third-grade,
fourth-grade, and fifth-grade students identified with low externalizing behaviors who
participated in the required ACES program beginning first quarter first year of
participation pretest compared to their beginning fourth quarter end of second year of
participation posttest behavior as measured by the Fountas & Pinnell Benchmark
Assessment System (2008) scores for (a) instructional reading level. Because multiple
statistical tests will be conducted, a one-tailed .01 alpha level will be employed to help
control for Type 1 errors. Means and standard deviations will be displayed on tables.

Research question nine will analyze intermediate level third-grade, fourth-grade,
and fifth-grade students identified with moderate, mild, and low externalizing behaviors
who participated in the required All Children Experience Success (ACES) program
compared to posttest instructional reading data.

**Overarching Posttest-Posttest Nebraska State Reading Assessment Research
Question #9.** Do intermediate level third-grade, fourth-grade, and fifth-grade students
identified with moderate externalizing behaviors compared to intermediate level third-
grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors
compared to intermediate level intermediate level third-grade, fourth-grade, and fifth-
grade students identified with low externalizing behaviors who participated in the
required ACES program have end of second year fourth quarter of participation posttest Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level?

**Sub-Question 9a.** Will there be a difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program have end of second year fourth quarter of participation posttest Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level?

**Analysis.** Research Sub-Questions #9a will be analyzed using a single classification Analysis of Variance (ANOVA) to determine the main effect congruence or difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors compared to intermediate level intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program end of second year fourth quarter of participation posttest Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level. An $F$ ratio will be calculated and an alpha level of .05 will be utilized to test the null hypothesis. Independent $t$ tests will be utilized for contrast analysis if a
statistically significant $F$ ratio is observed. Means and standard deviations will be displayed in tables.

Research question ten will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program pre-test compared to post-test data Maze comprehension reading test.

**Overarching Pretest-Posttest Maze Comprehension Reading Test Research Question**

**Research Question #10.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as measured by Maze comprehension reading test as measured by the fourth quarter of year two (a) comprehension?

**Sub-Question 10a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension?

**Analysis.** Research Sub-Questions #10a will be analyzed using a dependent $t$ test to examine the significance of the difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors
who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension. Because multiple statistical tests will be conducted, a one-tailed .01 alpha level will be employed to help control for Type 1 errors. Means and standard deviations will be displayed on tables.

Research question eleven will analyze intermediate level third-grade and fourth-grade students identified with mild externalizing behaviors who participated in the required ACES program pre-test compared to post-test data Maze comprehension reading test.

**Overarching Pretest-Posttest Maze Comprehension Reading Test Research Question**

**Research Question #11.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension?

**Sub-Question 11a.** Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as
measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension?

**Analysis.** Research Sub-Questions #11a will be analyzed using a dependent \( t \) test to examine the significance of the difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension. Because multiple statistical tests will be conducted, a one-tailed .01 alpha level will be employed to help control for Type 1 errors. Means and standard deviations will be displayed on tables.

Research question twelve will analyze intermediate level third-grade and fourth-grade students identified with low externalizing behaviors who participated in the required ACES program pre-test compared to post-test data Maze comprehension reading test.

**Overarching Pretest-Posttest Maze Comprehension Reading Test Research**

**Research Question #12.** Do intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension?
Sub-Question 12a. Will there be a significant difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension?

Analysis. Research Sub-Questions #12a will be analyzed using dependent t test to examine the significance of the difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program lose, maintain, or improve, their beginning first quarter first year of participation pretest compared to their beginning fourth quarter end of second year of participation posttest data as measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension. Because multiple statistical tests will be conducted, a one-tailed .01 alpha level will be employed to help control for Type 1 errors. Means and standard deviations will be displayed on tables.

Research question thirteen will analyze intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors compared to intermediate level third-grade and fourth-grade students identified with low externalizing behaviors who participated in the required ACES program post-test compared to post-test Maze comprehension reading data.
Overarching Posttest-Posttest Maze Comprehension Reading Research

Question #13 Will there be a difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program have end of second year fourth quarter of participation Maze comprehension test as measured by the fourth quarter of year two (a) comprehension?

Sub-Question 13a. Will there be a difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors who participated in the required ACES program have end of second year fourth quarter of participation posttest Maze comprehension test scored for (a) comprehension?

Analysis. Research Sub-Questions #13a analyzed using a single classification Analysis of Variance (ANOVA) to determine the main effect congruence or difference between intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors who participated in the required ACES program compared to intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors who participated in the required ACES program compared to intermediate level third-grade, fourth-grade, and fifth-grade
students identified with low externalizing behaviors who participated in the required ACES program have fourth quarter end of second year of participation posttest data as measured by Maze comprehension test as measured by the fourth quarter of year two (a) comprehension. An $F$ ratio will be calculated and an alpha level of .05 will be utilized to test the null hypothesis. Means and standard deviations will be displayed in tables.

**Data Collection Procedures**

All student behavior and achievement data was retrospective, archival, and routinely collected school information. Permission to conduct the research will be obtained from the school district and the appropriate school research personnel. Naturally formed groups of 18 students in one arm and 22 and 46 students in the other two arms will include behavior and academic data. Non-coded numbers were used to display de-identified behavior and achievement data. Aggregated reported with means and standard deviations in tables.

**Performance site.** This research will be conducted in the public school setting through normal educational and assessment practices. The study procedures did not interfere with the normal educational and assessment practices of the public school and did not involve coercion or discomfort of any kind. Data will be stored on spreadsheets and computer flash drives for statistical analysis in the office of the primary researcher and the dissertation chair. Data and computer files will be kept in locked file cabinets. No individual identifiers will be attached to the data.

**Institutional Review Board (IRB) for the protection of Human Subjects Approval Category.** The exemption categories for this study were provided under
45CFR.10 (b) categories 1 and 4. The research will be conducted using routinely collected archival data. A letter of support from the district was provided for IRB review.
CHAPTER FOUR

Results

Purpose of the Study

The purpose of this study is to determine the impact of teacher administered positive behavioral support interventions on the behavior and achievement of intermediate level students identified with measured moderate, mild, and low disruptive externalizing behaviors.

Implementation of the Independent Variables

The study has one independent variable with three conditions. Independent variable, externalizing behavior, condition #1 was a naturally formed group of intermediate level students third-grade through fifth-grade with moderate externalizing behaviors who participated in teacher administered positive behavioral support interventions. Independent variable, externalizing behavior, condition #2 was a naturally formed group of intermediate level students third-grade through fifth-grade with mild externalizing behaviors who participated in teacher administered positive behavioral support interventions. Independent variable, externalizing behavior, condition #3 was a naturally formed group of intermediate level students third-grade through fifth-grade with low externalizing behaviors who participated in teacher administered positive behavioral support interventions. Universal Behavior Screen externalizing behavior summative scores by their classroom teachers determined the placement of students into the moderate, mild, and low categories for the positive behavior support program.
Dependent Measures

The study’s four dependent variables are (1) pretest posttest and posttest-posttest externalizing behavior conditions as measured by the end of the fourth quarter of year two Universal Behavior Screen domain scores for (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative attitude, and (g) aggressive behavior. (2) Pretest posttest and posttest-posttest reading achievement as measured by the fourth quarter of year two (a) Nebraska State Assessment-Reading. (3) Pretest posttest and posttest-posttest reading performance as measured by the fourth quarter of year two Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level. (4) Pretest posttest and posttest-posttest reading achievement as measured by the fourth quarter of year two (a) comprehension. All study achievement and behavior data related to each of the dependent variables were retrospective, archival, and routinely collected school information. Permission from the appropriate school research personnel was obtained before data were collected and analyzed.

Table 1 displays demographic information of moderate externalizing behavior students identified on the universal behavior screen. Table 2 displays demographic information of mild externalizing behavior students identified on the universal behavior screen. Table 3 displays demographic information of low externalizing behavior students, identified on the universal behavior screen.
Table 1

*Demographic Information of Moderate Externalizing Behavior Students Identified on the Universal Behavior Screen*

<table>
<thead>
<tr>
<th>Student Number</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Male</td>
<td>Caucasian</td>
<td>3</td>
</tr>
<tr>
<td>2.</td>
<td>Male</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>3.</td>
<td>Male</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>4.</td>
<td>Male</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>5.</td>
<td>Female</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>6.</td>
<td>Female</td>
<td>Black</td>
<td>5</td>
</tr>
<tr>
<td>7.</td>
<td>Male</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>8.</td>
<td>Male</td>
<td>Caucasian</td>
<td>3</td>
</tr>
<tr>
<td>9.</td>
<td>Male</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>10.</td>
<td>Male</td>
<td>Black</td>
<td>5</td>
</tr>
<tr>
<td>11.</td>
<td>Male</td>
<td>Black</td>
<td>5</td>
</tr>
<tr>
<td>12.</td>
<td>Male</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>14.</td>
<td>Male</td>
<td>Black</td>
<td>5</td>
</tr>
<tr>
<td>15.</td>
<td>Male</td>
<td>Black</td>
<td>5</td>
</tr>
<tr>
<td>16.</td>
<td>Male</td>
<td>Hispanic</td>
<td>4</td>
</tr>
<tr>
<td>17.</td>
<td>Female</td>
<td>Black</td>
<td>4</td>
</tr>
<tr>
<td>18.</td>
<td>Male</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>19.</td>
<td>Male</td>
<td>Caucasian</td>
<td>5</td>
</tr>
</tbody>
</table>

*Note.* All students were in attended the research school district for the school year 2009-2010, 2010-2011.
Table 2

Demographic Information of Mild Externalizing Behavior Students Identified on the Universal Behavior Screen

<table>
<thead>
<tr>
<th>Student Number</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.</td>
<td>Male</td>
<td>Black</td>
<td>4</td>
</tr>
<tr>
<td>21.</td>
<td>Female</td>
<td>Black</td>
<td>4</td>
</tr>
<tr>
<td>22.</td>
<td>Male</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>23.</td>
<td>Female</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>24.</td>
<td>Male</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>25.</td>
<td>Male</td>
<td>Hispanic</td>
<td>5</td>
</tr>
<tr>
<td>26.</td>
<td>Female</td>
<td>Caucasian</td>
<td>3</td>
</tr>
<tr>
<td>27.</td>
<td>Female</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>28.</td>
<td>Female</td>
<td>Hispanic</td>
<td>4</td>
</tr>
<tr>
<td>29.</td>
<td>Male</td>
<td>Black</td>
<td>4</td>
</tr>
<tr>
<td>30.</td>
<td>Female</td>
<td>Hispanic</td>
<td>5</td>
</tr>
<tr>
<td>31.</td>
<td>Male</td>
<td>Black</td>
<td>5</td>
</tr>
<tr>
<td>32.</td>
<td>Female</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>33.</td>
<td>Female</td>
<td>Black</td>
<td>5</td>
</tr>
<tr>
<td>34.</td>
<td>Female</td>
<td>Hispanic</td>
<td>3</td>
</tr>
<tr>
<td>35.</td>
<td>Male</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>36.</td>
<td>Male</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>37.</td>
<td>Male</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>38.</td>
<td>Female</td>
<td>Black</td>
<td>5</td>
</tr>
<tr>
<td>39.</td>
<td>Male</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>40.</td>
<td>Male</td>
<td>Indian</td>
<td>5</td>
</tr>
<tr>
<td>41.</td>
<td>Female</td>
<td>Caucasian</td>
<td>5</td>
</tr>
</tbody>
</table>

*Note.* All students were in attended the research school district for the school year 2009-2010, 2010-2011.
Table 3

Demographic Information of Low Externalizing Behavior Students Identified on the Universal Behavior Screen

<table>
<thead>
<tr>
<th>Student Number</th>
<th>Gender</th>
<th>Ethnicity</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>Male</td>
<td>Middle Eastern</td>
<td>3</td>
</tr>
<tr>
<td>43</td>
<td>Female</td>
<td>Hispanic</td>
<td>3</td>
</tr>
<tr>
<td>44</td>
<td>Male</td>
<td>Black</td>
<td>3</td>
</tr>
<tr>
<td>45</td>
<td>Female</td>
<td>Black</td>
<td>3</td>
</tr>
<tr>
<td>46</td>
<td>Male</td>
<td>Caucasian</td>
<td>3</td>
</tr>
<tr>
<td>47</td>
<td>Female</td>
<td>Caucasian</td>
<td>3</td>
</tr>
<tr>
<td>48</td>
<td>Female</td>
<td>Caucasian</td>
<td>3</td>
</tr>
<tr>
<td>49</td>
<td>Male</td>
<td>Caucasian</td>
<td>3</td>
</tr>
<tr>
<td>50</td>
<td>Male</td>
<td>Black</td>
<td>3</td>
</tr>
<tr>
<td>52</td>
<td>Female</td>
<td>Black</td>
<td>3</td>
</tr>
<tr>
<td>53</td>
<td>Female</td>
<td>Black</td>
<td>3</td>
</tr>
<tr>
<td>54</td>
<td>Male</td>
<td>Caucasian</td>
<td>3</td>
</tr>
<tr>
<td>55</td>
<td>Male</td>
<td>Black</td>
<td>3</td>
</tr>
<tr>
<td>56</td>
<td>Male</td>
<td>Caucasian</td>
<td>3</td>
</tr>
<tr>
<td>57</td>
<td>Male</td>
<td>Caucasian</td>
<td>3</td>
</tr>
<tr>
<td>59</td>
<td>Female</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>60</td>
<td>Male</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>61</td>
<td>Female</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>62</td>
<td>Female</td>
<td>Black</td>
<td>4</td>
</tr>
<tr>
<td>63</td>
<td>Female</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>64</td>
<td>Male</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>67</td>
<td>Female</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>68</td>
<td>Female</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>69</td>
<td>Female</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>70</td>
<td>Male</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>71</td>
<td>Female</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>72</td>
<td>Female</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>73</td>
<td>Male</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>75</td>
<td>Male</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>77</td>
<td>Male</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>78</td>
<td>Female</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>79</td>
<td>Male</td>
<td>Indian</td>
<td>4</td>
</tr>
<tr>
<td>81</td>
<td>Female</td>
<td>Black</td>
<td>4</td>
</tr>
<tr>
<td>82</td>
<td>Male</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>83</td>
<td>Male</td>
<td>Black</td>
<td>4</td>
</tr>
<tr>
<td>84</td>
<td>Male</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>#</td>
<td>Gender</td>
<td>Race</td>
<td>Age</td>
</tr>
<tr>
<td>----</td>
<td>--------</td>
<td>---------------------</td>
<td>-----</td>
</tr>
<tr>
<td>85</td>
<td>Female</td>
<td>Hispanic</td>
<td>5</td>
</tr>
<tr>
<td>87</td>
<td>Female</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>89</td>
<td>Female</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>91</td>
<td>Male</td>
<td>Caucasian</td>
<td>3</td>
</tr>
<tr>
<td>92</td>
<td>Female</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>93</td>
<td>Male</td>
<td>Black</td>
<td>5</td>
</tr>
<tr>
<td>94</td>
<td>Female</td>
<td>Caucasian</td>
<td>5</td>
</tr>
<tr>
<td>95</td>
<td>Female</td>
<td>Black</td>
<td>5</td>
</tr>
<tr>
<td>99</td>
<td>Female</td>
<td>Caucasian</td>
<td>4</td>
</tr>
<tr>
<td>101</td>
<td>Male</td>
<td>Caucasian</td>
<td>5</td>
</tr>
</tbody>
</table>

*Note.* All students were in attended the research school district for the school year 2009-2010, 2010-2011.
**Research Question #1**

Table 4 displays pretest compared to posttest change frequencies for intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate, mild, and low externalizing behaviors who participated in the required ACES program total Universal Behavior Screen subtests for (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative attitude, and (g) aggressive behavior. The first hypothesis was tested using chi-square ($X^2$) analysis for an A x B x C contingency table with further analyses representing the 2-way interactions for A x B, A x C, and B x C, respectively for pretest compared to posttest change frequencies. As found in Table 4 the null hypothesis was rejected for the A x B x C contingency analysis where $X^2(2, N = 736) = 26.60, p < .001$. Further analysis to explain the overall significance determined that the A x B pretest compared to posttest change frequencies for intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate (A) compared to mild (B) externalizing behaviors who participated in the required ACES program total Universal Behavior Screen subtests for (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative attitude, and (g) aggressive behavior was not statistically significantly different where $X^2(1, N = 572) = 0.957, p = .757$. Continuing analysis to explain the overall significance determined that the A x C pretest compared to posttest change frequencies for intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate (A) compared to low (C) externalizing behaviors who participated in the required ACES program total Universal Behavior Screen subtests for (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection,
(e) low academic achievement, (f) negative attitude, and (g) aggressive behavior was statistically significantly different where $\chi^2(1, N = 511) = 21.50, p < .001$. The final analysis to explain the overall significance determined that the B x C pretest compared to posttest change frequencies for intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild (B) compared to low (C) externalizing behaviors who participated in the required ACES program total Universal Behavior Screen subtests for (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative attitude, and (g) aggressive behavior was statistically significantly different where $\chi^2(1, N = 389) = 20.20, p < .001$. 
Table 4

Results of Chi-Square Pretest Compared to Posttest Change Frequencies for Intermediate Level Third-Grade, Fourth-Grade, and Fifth-Grade Students Identified With Moderate, Mild, and Low Externalizing Behaviors Who Participated in the Required Aces Program Total Universal Behavior Screen Subtests for (a) Stealing, (b) Lying, Cheating, Sneaking, (c) Behavior Problems, (d) Peer Rejection, (e) Low Academic Achievement, (f) Negative Attitude, and (g) Aggressive Behavior

<table>
<thead>
<tr>
<th>Behavior Screen Frequencies</th>
<th>Moderate Externalizing Behavior</th>
<th>Mild Externalizing Behavior</th>
<th>Low Externalizing Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>Pretest</td>
<td>241 (69)</td>
<td>159 (71)</td>
<td>79 (48)</td>
</tr>
<tr>
<td>Posttest</td>
<td>106 (31)</td>
<td>66 (29)</td>
<td>85 (52)</td>
</tr>
<tr>
<td>Totals</td>
<td>347 (100)</td>
<td>225 (100)</td>
<td>164 (100)</td>
</tr>
<tr>
<td></td>
<td>26.60</td>
<td>p &lt; .001^abcd</td>
<td></td>
</tr>
</tbody>
</table>

^aObserved verses expected cell frequencies used for calculation with df = 2 and a tabled value = 9.210 required to obtain an alpha level of .01, the threshold for statistical significance for this research question.

Post Hoc Analyses

^bA x B: Students with Moderate Externalizing Behavior x Students with Mild Externalizing Behavior was not statistically significantly different where $X^2(1, N = 572) = 0.957, p = .757$.

^cA x C: Students with Moderate Externalizing Behavior x Students with Low Externalizing Behavior was statistically significantly different where $X^2(1, N = 511) = 21.50, p < .001$.

^dB x C: Students with Mild Externalizing Behavior x Students with Low Externalizing Behavior was statistically significantly different where $X^2(1, N = 389) = 20.20, p < .001$. 

________________________________________________________________________
Research Question #2

Table 5 displays pretest compared to posttest NeSA-Reading performance level scores for students with moderate externalizing behaviors. The second hypothesis was tested using the dependent \( t \) test. As seen in Table 5 the null hypothesis for NeSA-Reading scores over time for students with moderate externalizing behaviors was not rejected in the direction of deteriorating scores where pretest \( M = 1.83, SD = 0.79; \) posttest \( M = 1.72, SD = 0.57; \) and \( t(17) = -0.70, p = .25 \) (one-tailed), \( d = -0.16 \).

Research Question #3

Table 5 also displays pretest compared to posttest NeSA-Reading performance level scores for students with mild externalizing behaviors. The third hypothesis was tested using the dependent \( t \) test. As seen in Table 5 the null hypothesis for NeSA-Reading scores over time for students with mild externalizing behaviors was not rejected, staying the same, where pretest \( M = 1.64, SD = 0.58; \) posttest \( M = 1.64, SD = 0.73; \) and \( t(21) = 0.00, p = .50 \) (one-tailed), \( d = 0.00 \).

Research Question #4

Table 5 also displays pretest compared to posttest NeSA-Reading performance level scores for students with low externalizing behaviors. The fourth hypothesis was tested using the dependent \( t \) test. As seen in Table 5 the null hypothesis for NeSA-Reading scores over time for students with low externalizing behaviors was not rejected in the direction of improving scores where pretest \( M = 1.89, SD = 0.73; \) posttest \( M = 2.00, SD = 0.63; \) and \( t(45) = 0.96, p = .17 \) (one-tailed), \( d = 0.16 \).
Table 5

*Pretest Compared to Posttest NeSA-Reading Performance Level Scores for Students with Moderate, Mild, and Low Externalizing Behaviors*

<table>
<thead>
<tr>
<th>Students’ Behavior Level</th>
<th>Pretest</th>
<th>Posttest</th>
<th>d</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>1.83</td>
<td>(0.79)</td>
<td>1.72</td>
<td>(0.57)</td>
<td>-0.16</td>
</tr>
<tr>
<td>Mild</td>
<td>1.64</td>
<td>(0.58)</td>
<td>1.64</td>
<td>(0.73)</td>
<td>0.00</td>
</tr>
<tr>
<td>Low</td>
<td>1.89</td>
<td>(0.73)</td>
<td>2.00</td>
<td>(0.63)</td>
<td>0.16</td>
</tr>
</tbody>
</table>

*aNote. Performance Level Score Conversions: 1 = Below Grade Level Performance; 2 = Meets Grade Level Performance; and 3 = Exceeds Grade Level Performance. †ns.*
Research Question #5

Table 6 displays posttest results of Analysis of Variance (ANOVA) for posttest compared to posttest NeSA-Reading performance level scores for students with moderate, mild, and low externalizing behaviors. As seen in Table 6 the null hypothesis for NeSA-Reading posttest scores for students with moderate, mild, and low externalizing behaviors was not rejected where students with moderate externalizing behaviors posttest $M = 1.72$, $SD = 0.57$; students with mild externalizing behaviors posttest $M = 1.64$, $SD = 0.73$; students with low externalizing behaviors posttest $M = 2.00$, $SD = 0.63$, and $F(2, 83) = 2.79$, $p = .07$. Because no statistically significant main effect $F$-ratio was observed no post hoc contrast analyses were conducted.
Table 6

*Results of Analysis of Variance Posttest Compared to Posttest NeSA-Reading Performance Level Scores for Students with Moderate, Mild, and Low Externalizing Behaviors*

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2.33</td>
<td>1.17</td>
<td>2</td>
<td>2.79</td>
<td>.07†</td>
</tr>
<tr>
<td>Within Groups</td>
<td>34.70</td>
<td>0.42</td>
<td>83</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students’ Behavior Level</th>
<th>Mean (SD)</th>
<th>NeSA-Reading Performance Level Descriptors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate</td>
<td>1.72 (0.33)</td>
<td>Below Grade Level</td>
</tr>
<tr>
<td>Mild</td>
<td>1.64 (0.53)</td>
<td>Below Grade Level</td>
</tr>
<tr>
<td>Low</td>
<td>2.00 (0.40)</td>
<td>Meets Grade Level</td>
</tr>
</tbody>
</table>

†ns. No *post hoc* contrast analysis conducted.
**Research Question #6**

Table 7 displays pretest compared to posttest Fountas and Pinnell instructional reading level scores for students with moderate externalizing behaviors. The sixth hypothesis was tested using the dependent $t$ test. As seen in Table 7 the null hypothesis for Fountas and Pinnell instructional reading level scores over time for students with moderate externalizing behaviors was rejected in the direction of improving scores where pretest $M = 1.50, SD = 0.51$; posttest $M = 1.83, SD = 0.71$; and $t(17) = 2.38, p = .01$ (one-tailed), $d = 0.54$.

**Research Question #7**

Table 7 also displays pretest compared to posttest Fountas and Pinnell instructional reading level scores for students with mild externalizing behaviors. The seventh hypothesis was tested using the dependent $t$ test. As seen in Table 7 the null hypothesis for Fountas and Pinnell instructional reading level scores over time for students with moderate externalizing behaviors was rejected in the direction of improving scores where pretest $M = 1.45, SD = 0.51$; posttest $M = 1.77, SD = 0.68$; and $t(21) = 2.63, p = .01$ (one-tailed), $d = 0.53$.

**Research Question #8**

Finally, Table 7 displays pretest compared to posttest Fountas and Pinnell instructional reading level scores for students with low externalizing behaviors. The eighth hypothesis was tested using the dependent $t$ test. As seen in Table 7 the null hypothesis for Fountas and Pinnell instructional reading level scores over time for students with low externalizing behaviors was rejected in the direction of improving
scores where pretest $M = 1.91, SD = 0.69$; posttest $M = 2.20, SD = 0.66$; and $t(45) = 2.92$, $p = .003$ (one-tailed), $d = 0.47$. 
Table 7

Pretest Compared to Posttest Fountas and Pinnell Instructional Reading Level Scores for Students with Moderate, Mild, and Low Externalizing Behaviors

<table>
<thead>
<tr>
<th>Students’ Behavior Level</th>
<th>Pretest</th>
<th>Posttest</th>
<th>d</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate</td>
<td>1.50 (0.51)</td>
<td>1.83 (0.71)</td>
<td>0.54</td>
<td>2.38</td>
<td>.01**</td>
</tr>
<tr>
<td>Mild</td>
<td>1.45 (0.51)</td>
<td>1.77 (0.68)</td>
<td>0.53</td>
<td>2.63</td>
<td>.01**</td>
</tr>
<tr>
<td>Low</td>
<td>1.91 (0.69)</td>
<td>2.20 (0.66)</td>
<td>0.47</td>
<td>2.92</td>
<td>.003**</td>
</tr>
</tbody>
</table>

*aNote. Instructional Reading Level Score Conversions: 1 = Below Grade Level Performance; 2 = Meets Grade Level Performance; and 3 = Exceeds Grade Level Performance.*

**p ≤ .01
Research Question #9

Table 8 displays posttest results of Analysis of Variance (ANOVA) for posttest compared to posttest Fountas and Pinnell instructional reading level scores for students with moderate, mild, and low externalizing behaviors. As seen in Table 8 the null hypothesis for Fountas and Pinnell instructional reading level posttest scores for students with moderate, mild, and low externalizing behaviors was rejected where students with moderate externalizing behaviors posttest $M = 1.72$, $SD = 0.71$; students with mild externalizing behaviors posttest $M = 1.77$, $SD = 0.68$; students with low externalizing behaviors posttest $M = 2.20$, $SD = 0.66$, and $F(2, 83) = 3.74$, $p = .03$. Because a statistically significant main effect $F$-ratio was observed post hoc contrast analyses Tukey Honestly Significant Difference Tests were conducted resulting in no statistically significant comparisons.
Table 8

Results of Analysis of Variance Posttest Compared to Posttest Fountas and Pinnell Instructional Reading Level Scores for Students with Moderate, Mild, and Low Externalizing Behaviors

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3.39</td>
<td>1.69</td>
<td>2</td>
<td>3.74</td>
<td>.03*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>37.60</td>
<td>0.45</td>
<td>83</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students’ Behavior Level</th>
<th>Mean (SD)</th>
<th>Fountas and Pinnell Instructional Reading Level Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate</td>
<td>1.83</td>
<td>Below Grade Level</td>
</tr>
<tr>
<td>Mild</td>
<td>1.77</td>
<td>Below Grade Level</td>
</tr>
<tr>
<td>Low</td>
<td>2.20</td>
<td>Meets Grade Level</td>
</tr>
</tbody>
</table>

*p < .05.

Tukey Honestly Significant Difference Post Hoc Test

Moderate (n = 18) verses Mild (n = 22) non-significant.
Moderate (n = 18) verses Low (n = 46) non-significant.
Mild (n = 22) verses Low (n = 46) non-significant.
Research Question #10

Table 9 displays pretest compared to posttest MAZE percentile reading comprehension level scores for students with moderate externalizing behaviors. The tenth hypothesis was tested using the dependent t test. As seen in Table 9 the null hypothesis for MAZE percentile reading comprehension level scores over time for students with moderate externalizing behaviors was not rejected in the direction of improving scores where pretest $M = 33.94$, $SD = 30.17$; posttest $M = 42.39$, $SD = 27.30$; and $t(17) = 1.19$, $p = .13$ (one-tailed), $d = 0.29$.

Research Question #11

Table 9 also displays pretest compared to posttest MAZE percentile reading comprehension level scores for students with mild externalizing behaviors. The eleventh hypothesis was tested using the dependent t test. As seen in Table 9 the null hypothesis for MAZE percentile reading comprehension level scores over time for students with mild externalizing behaviors was rejected in the direction of improving scores where pretest $M = 25.73$, $SD = 20.51$; posttest $M = 46.00$, $SD = 28.51$; and $t(21) = 4.53$, $p = .00001$ (one-tailed), $d = 0.83$.

Research Question #12

Finally, Table 9 displays pretest compared to posttest MAZE percentile reading comprehension level scores for students with mild externalizing behaviors. The twelfth hypothesis was tested using the dependent t test. As seen in Table 9 the null hypothesis for MAZE percentile reading comprehension level scores over time for students with low externalizing behaviors was rejected in the direction of improving scores where pretest $M$
= 43.78, $SD = 20.51$; posttest $M = 59.59, SD = 29.40$; and $t(45) = 5.27, p = .00001$ (one-tailed), $d = 0.63$. 
Table 9

Pretest Compared to Posttest MAZE Percentile Reading Comprehension Level Scores for Students With Moderate, Mild, And Low Externalizing Behaviors

<table>
<thead>
<tr>
<th>Students' Behavior Level</th>
<th>Pretest</th>
<th>Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Moderate</td>
<td>33.94</td>
<td>(30.17)</td>
</tr>
<tr>
<td>Mild</td>
<td>25.73</td>
<td>(20.51)</td>
</tr>
<tr>
<td>Low</td>
<td>43.78</td>
<td>(20.51)</td>
</tr>
</tbody>
</table>

Note. MAZE percentile reading comprehension level scores converted from standard scores with a $M = 100$ and a $SD = 15$.

†ns. ***$p < .0001$
Research Question #13

Table 10 displays posttest results of Analysis of Variance (ANOVA) for posttest compared to posttest MAZE percentile reading comprehension level scores for students with moderate, mild, and low externalizing behaviors. As seen in Table 10 the null hypothesis for MAZE percentile reading comprehension level posttest scores for students with moderate, mild, and low externalizing behaviors was rejected where students with moderate externalizing behaviors posttest $M = 42.39$, $SD = 27.30$; students with mild externalizing behaviors posttest $M = 46.00$, $SD = 28.51$; students with low externalizing behaviors posttest $M = 59.59$, $SD = 29.40$, and $F(2, 83) = 3.07$, $p = .05$. Because a statistically significant main effect $F$-ratio was observed post hoc contrast analyses Tukey Honestly Significant Difference Tests were conducted resulting in no statistically significant comparisons.
Table 10

Results of Analysis of Variance Posttest Compared to Posttest MAZE Percentile Reading Comprehension Level Scores for Students with Moderate, Mild, and Low Externalizing Behaviors

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>Mean Square</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>5,080.06</td>
<td>2,540.03</td>
<td>2</td>
<td>3.07</td>
<td>.05*</td>
</tr>
<tr>
<td>Within Groups</td>
<td>68,739.43</td>
<td>828.19</td>
<td>83</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students’ Behavior Level</th>
<th>Mean (SD)</th>
<th>MAZE Percentile Reading Comprehension Level Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate</td>
<td>42.39 (27.30)</td>
<td>Average Range</td>
</tr>
<tr>
<td>Mild</td>
<td>46.00 (28.51)</td>
<td>Average Range</td>
</tr>
<tr>
<td>Low</td>
<td>59.59 (29.40)</td>
<td>Average Range</td>
</tr>
</tbody>
</table>

*p < .05.

Tukey Honestly Significant Difference Post Hoc Test

Moderate (n = 18) verses Mild (n = 22) non-significant.
Moderate (n = 18) verses Low (n = 46) non-significant.
Mild (n = 22) verses Low (n = 46) non-significant.
CHAPTER FIVE

Conclusions and Discussion

The purpose of this study was to determine the impact of teacher administered positive behavioral support interventions on the behavior and achievement of intermediate level students identified with measured moderate, mild, and low disruptive externalizing behaviors.

The study has one independent variable with three conditions. Independent variable, externalizing behavior, condition #1 was a naturally formed group of intermediate level students third-grade through fifth-grade with moderate externalizing behaviors who participated in teacher administered positive behavioral support interventions. Independent variable, externalizing behavior, condition #2 was a naturally formed group of intermediate level students third-grade through fifth-grade with mild externalizing behaviors who participated in teacher administered positive behavioral support interventions. Independent variable, externalizing behavior, condition #3 was a naturally formed group of intermediate level students third-grade through fifth-grade with low externalizing behaviors who participated in teacher administered positive behavioral support interventions. Universal Behavior Screen externalizing behavior summative scores by their classroom teachers determined the placement of students into the moderate, mild, and low categories for the positive behavior support program.

The study’s four dependent variables are (1) pretest posttest and posttest-posttest externalizing behavior conditions as measured by the end of the fourth quarter of year two Universal Behavior Screen domain scores for (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f)
negative attitude, and (g) aggressive behavior. (2) Pretest posttest and posttest-posttest reading achievement as measured by the fourth quarter of year two (a) Nebraska State Assessment-Reading. (3) Pretest posttest and posttest-posttest reading performance as measured by the fourth quarter of year two Fountas & Pinnell Benchmark Assessment System (2008) scores for (a) instructional reading level. (4) Pretest posttest and posttest-posttest reading achievement as measured by the fourth quarter of year two (a) comprehension. All study achievement and behavior data related to each of the dependent variables were retrospective, archival, and routinely collected school information. Permission from the appropriate school research personnel was obtained before data were collected and analyzed.

The following conclusions may be drawn from the study for each of the 13 research questions.

Conclusions

Research question #1 conclusion. Pretest compared to posttest change frequencies for intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate, mild, and low externalizing behaviors who participated in the required ACES program total Universal Behavior Screen subtests for (a) stealing, (b) lying, cheating, sneaking, (c) behavior problems, (d) peer rejection, (e) low academic achievement, (f) negative attitude, and (g) aggressive behavior indicated that pretest compared to posttest change frequencies for intermediate level third-grade, fourth-grade, and fifth-grade students identified with moderate externalizing behaviors had an overall decrease score of 135 on the Universal Behavior Screen subtests for externalizing behaviors. Furthermore, students identified with moderate externalizing behaviors ($n =$
18) at pretest had on average Universal Behavior Screen subtest scores of 13 confirming their designation of moderate externalizing behaviors however, at posttest the mean per student observation had decreased to 6 indicating a posttest designation of mild externalizing behaviors. Finally, 17 (94%) of the 18 students with moderate externalizing behaviors at posttest experienced externalizing behavior decreases and one students behavior remained the same. Pretest compared to posttest change frequencies for intermediate level third-grade, fourth-grade, and fifth-grade students identified with mild externalizing behaviors had an overall decrease score of 93 on the Universal Behavior Screen subtests for externalizing behaviors. Furthermore, students identified with mild externalizing behaviors ($n = 22$) at pretest had on average Universal Behavior Screen subtest scores of 7 confirming their designation of mild externalizing behaviors however, at posttest the mean per student observation had decreased to 3 indicating a posttest designation of low externalizing behaviors. Finally, 18 (82%) of the 22 students with mild externalizing behaviors at posttest experienced externalizing behavior decreases and 4 students behavior remained the same. Pretest compared to posttest change frequencies for intermediate level third-grade, fourth-grade, and fifth-grade students identified with low externalizing behaviors had an overall increase score of 6 on the Universal Behavior Screen subtests for externalizing behaviors. Furthermore, students identified with low externalizing behaviors ($n = 46$) at pretest had on average Universal Behavior Screen subtest scores of 1.7 confirming their designation of low externalizing behaviors however, at posttest the mean per student observation had increased to 1.8 indicating a continuing posttest designation of low externalizing behaviors. Finally, 43 (93%) of the 46 students with low externalizing behaviors at posttest were observed with continuing
low externalizing behavior while 3 students experienced increased externalizing behaviors.

**Research question #2 conclusion.** NeSA-Reading scores over time for students with moderate externalizing behaviors were not rejected in the direction of deteriorating scores with a pretest posttest difference of -0.11. The posttest mean score of 1.72 is equivalent to a below average reading score nomenclature indicating that students with moderate externalizing behaviors also have co-occurring reading delimitations that require more intensive reading instruction intervention.

**Research question #3 conclusion.** NeSA-Reading scores over time for students with mild externalizing behaviors were not rejected with equivalent pretest posttest mean scores of 1.64 and a difference of -0.00. The posttest mean score of 1.64 is equivalent to a below average reading score nomenclature indicating that students with mild externalizing behaviors also have co-occurring reading delimitations that require more intensive reading instruction intervention.

**Research question #4 conclusion.** NeSA-Reading scores over time for students with low externalizing behaviors were not rejected in the direction of improving scores with a pretest posttest difference of 0.11. The posttest mean score of 2.00 is equivalent to a right at grade level reading score threshold nomenclature indicating that students with low externalizing behaviors continue to require intensive reading instruction intervention.

**Research question #5 conclusion.** Students with moderate externalizing behaviors NeSA-Reading posttest mean scores compared to students with mild externalizing behaviors NeSA-Reading posttest mean scores difference was -0.08, students with moderate externalizing behaviors NeSA-Reading posttest mean scores
compared to students with low externalizing behaviors NeSA-Reading posttest mean scores difference was -0.28, and students with mild externalizing behaviors NeSA-Reading posttest mean scores compared to students with mild externalizing behaviors NeSA-Reading posttest mean scores difference was -0.36.

**Research question #6 conclusion.** Fountas and Pinnell instructional reading level scores over time for students with moderate externalizing behaviors was rejected in the direction of improving scores with a pretest posttest difference of 0.33. The posttest mean score of 1.83 is equivalent to a below grade level reading score nomenclature indicating that students with moderate externalizing behaviors also have co-occurring reading delimitations that require more intensive reading instruction intervention.

**Research question #7 conclusion.** Fountas and Pinnell instructional reading level scores over time for students with mild externalizing behaviors was rejected in the direction of improving scores with a pretest posttest difference of 0.32. The posttest mean score of 1.77 is equivalent to a below grade level reading score nomenclature indicating that students with mild externalizing behaviors also have co-occurring reading delimitations that require more intensive reading instruction intervention.

**Research question #8 conclusion.** Fountas and Pinnell instructional reading level scores over time for students with low externalizing behaviors was rejected in the direction of improving scores with a pretest posttest difference of 0.29. The posttest mean score of 2.20 is equivalent to a right at grade level reading score threshold nomenclature indicating that students with low externalizing behaviors continue to require intensive reading instruction intervention.
**Research question #9 conclusion.** Students with moderate externalizing behaviors Fountas and Pinnell instructional reading level posttest mean scores compared to students with mild externalizing behaviors Fountas and Pinnell instructional reading level posttest mean scores difference was 0.06, students with moderate externalizing behaviors Fountas and Pinnell instructional reading level posttest mean scores compared to students with low externalizing behaviors Fountas and Pinnell instructional reading level posttest mean scores difference was -0.37, and students with mild externalizing behaviors Fountas and Pinnell instructional reading level posttest mean scores compared to students with low externalizing behaviors Fountas and Pinnell instructional reading level posttest mean scores difference was -0.43.

**Research question #10 conclusion.** MAZE percentile reading comprehension level scores over time for students with moderate externalizing behaviors were not rejected in the direction of improving scores with a pretest posttest difference of 8.45. The posttest mean score of 42.39 is equivalent to an average level percentile reading comprehension score nomenclature indicating that students with moderate externalizing behaviors are reading for meaning and understanding despite reading delimitations measured on other reading assessments.

**Research question #11 conclusion.** MAZE percentile reading comprehension level scores over time for students with mild externalizing behaviors were rejected in the direction of improving scores with a pretest posttest difference of 20.27. The posttest mean score of 46.00 is equivalent to an average level percentile reading comprehension score nomenclature indicating that students with mild externalizing behaviors are reading for meaning and understanding despite reading delimitations measured on other reading assessments.
for meaning and understanding despite reading delimitations measured on other reading assessments.

**Research question #12 conclusion.** MAZE percentile reading comprehension level scores over time for students with low externalizing behaviors were rejected in the direction of improving scores with a pretest posttest difference of 15.81. The posttest mean score of 59.59 is equivalent to an average level percentile reading comprehension score nomenclature indicating that students with low externalizing behaviors are reading for meaning and understanding congruent with grade level reading abilities measured on other reading assessments.

**Research question #13 conclusion.** Students with moderate externalizing behaviors MAZE percentile reading comprehension level posttest mean scores compared to students with mild externalizing behaviors MAZE percentile reading comprehension level posttest mean scores difference was -3.61, students with moderate externalizing behaviors MAZE percentile reading comprehension level posttest mean scores compared to students with low externalizing behaviors MAZE percentile reading comprehension level posttest mean scores difference was -17.20, and students with mild externalizing behaviors MAZE percentile reading comprehension level posttest mean scores compared to students with low externalizing behaviors MAZE percentile reading comprehension level posttest mean scores difference was -13.59.

**Discussion**

Students who demonstrated moderate, mild, or low externalizing behaviors as rated by teachers on the Universal Behavior Screen at the research school decreased the amount of externalizing behaviors displayed in the research school setting. All groups
averaged in the mild to low range for externalizing behaviors on the Universal Screen posttest with 61 students scoring in the low range, 24 students in the mild range and one student in the moderate range demonstrating the effectiveness of the school wide positive behavior support program which focused on a positive proactive reinforcement approach.

With improved acceptable behavior demonstrated in the classroom students were expected to improve on three academic summative posttests over the two-year range. The NeSA-Reading test did not show a significant difference for the three groups while the low group did score at grade level on the posttest. The three subgroups did show significant difference when evaluated using the Fountas and Pinnell instructional reading level scores with the low group scoring at grade level. Students showed improvement on the MAZE percentile reading comprehension level scores with the mild and low groups making a significant gain. All three subgroups scored in the average range with the low group a few points below scoring above average.

The NeSa Reading test is scored only using Nebraska scores while the other assessments (MAZE percentile reading comprehension level scores & Fountas and Pinnell instructional reading level scores) are national norms and may have had an effect on the NeSA-Reading assessment scores. Students who struggle behaviorally scored lower on the three reading assessments. Over time, the decrease in externalizing behaviors with reading scores staying the same or increasing would give a positive outlook for the research school. The increase in reading scores and the decrease in externalizing behaviors was not enough to get all students to grade level proficiency in the area of reading. It should be noted that reading deficiencies continue to be areas of concern for at risk students, even with active participation in a school-wide positive behavior support program and best practice reading strategies. Due to this observation, and
because the NeSA-Reading assessment and the SWPBS were new to the research school, the research school will need to assertively continue to implement the school-wide positive behavioral support strategies that empower students and continue best practice reading interventions and strategies to continue to improve reading proficiency and decrease externalizing behaviors.

**Implications for practice.** School wide positive behavioral support systems utilize positive behavioral support strategies (O’Neill, Horner, Albin, Storey, & Sprague, 1990; Meyer & Evans, 1989) avoiding interventions that are aversive and intrusive using instead functional assessment (O’Neill, et al., 1990) to identify student externalizing acting out characteristics for prevention and instructional intervention. These interventions are utilized because curriculum and day-to-day group learning activities for behaviorally acting out youth has typically been characterized by high levels of external control (Knitzer, Steinberg, & Fleisch, 1990) and standard assignments have been interpreted by Clarke and colleagues (1995) as "aversive stimuli that generated disruptive behavior as escape responding through the operations of negative reinforcement (p. 235).” Best practices for these interventions are based primarily on manipulation of positive antecedent stimuli, which historically incorporated elements of preference (Foster-Johnson, Ferro, & Dunlap, 1994) and provision for student choice-making in the selection of instructional tasks (Dunlap, dePerczel, Clark, Wilson, Wright, & Gomez, 1994) in order to promote adaptive behavior change. School wide positive behavior systems are being implemented to help students remain in the classroom instead of being removed from the classroom for special placements or special education.
The SWPBS program and best practice reading strategies appear to be working effectively based on the results of this study. Since the time of this study the research school has continued to implement SWPBS and have added a literacy coach along with continued training on best practice reading strategies and interventions. Further studies should be performed on the continued implementation of SWPBS, effectiveness of best practice reading strategies, and the addition of a literacy coach.

Implications for policy. Students that attended the research school and were participants in this study were mostly from lower socio-economic (SES) homes. Studies show that students from families with fewer economic advantages perform less well than their peers from more socio-economic advantaged homes (Baharudin & Luster, 1998; Jeynes, 2002; Eamon, 2005). School districts must continue to be proactive in their approach (Marzano, 2007) to meeting the needs of all students especially students who are risk and are more likely to not graduate from high school. This approach must start at the elementary level as early as pre-schools.

The current program required all students to participate in the SWPBS program as an integral function of the school’s culture, context, and curriculum. School leaders need to recognize the importance of a SWPBS program that cultivates the importance of academic achievement, promotes active participation, and teaches the social skills students need to be successful citizens for future success in our society. Given the overall positive findings of this research project it is recommended that the study school continue implementation of the SWPBS program and perhaps even more importantly the ongoing teacher training on positive support for all students.

Implications for further research. Implementation of the SWPBS program was found to be a critical factor in the behavior outcomes of students at the study school that
also resulted in improved reading scores. Therefore, it is recommended that longitudinal research be conducted to determine the lasting effects of SWPBS on students behavior and academic success as they move on to middle school and beyond.
References


Dowd, T., & Tierney, J. (1992). Teaching social skills to youth; A curriculum for child-care providers. Boys Town, NE; Father Flanagan’s Boys’ Home.


www2.ed.gov/policy/gen/leg/recovery/implementation.html


Westside Community Schools Mission Statement (2011, October). *ACES mission statement.* Presented at Westside Community Schools, Omaha, NE.

Wong, H., & Wong, R. (2009). *The first days of school; How to be an effective teacher.* Mountain View CA; Harry K. Wong Publications Inc.