A Program Evaluation of the Comprehensive Student and Staff Support (CSSS) System in the Washoe County School District of Nevada

A dissertation submitted in partial fulfillment of the requirement for the degree of Doctor of Philosophy in Counseling & Educational Psychology

by

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ABSTRACT

A Program Evaluation of the Comprehensive Student and Staff Support (CSSS) System in the Washoe County School District of Nevada

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The purpose of this study is to examine the extent to which Comprehensive Student and Staff Support (CSSS) system implemented in five elementary school sites for students with Emotional/Behavioral Disability in the Washoe County School District of Northern Nevada has met its objectives for improving student outcomes. Daily student point sheets and standardized test scores from Math and Reading achievement assessments given every trimester were the primary data analyzed. Several dependent variables (DVs) relating to quarterly means for student behavior were analyzed using the Kruskal-Wallis H test paired with Levene’s test for Homogeneity of Variances. The ANOVA test was used to test changes in DVs related to students’ achievement test scores. In both cases, post-hoc comparisons were made to identify within which trimester or quarter changes occurred. Visual analysis was used to determine directionality. Results from both statistical and clinical analyses found that DVs related to disruptive student behaviors demonstrated more increases than decreases. Several DVs related to students’ scores on academic achievement tests indicated that scores improved across the school year. Overall, available data failed to show that the CSSS system met its program objectives to a satisfactory extent. Concerns related to accurate and consistent data entry; data usage, availability, and accessibility; data used for professional accountability and planning purposes; and problems with implementation fidelity led to implications and recommendations for program improvement and need for follow-up program evaluation.
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CHAPTER I: THE PROBLEM STATEMENT AND ITS BACKGROUND

Introduction

"Educating students identified as seriously emotionally disturbed is one of the most stressful, complex, and difficult challenges facing public education today, and perhaps one of our greatest failures" (Osher, Osher, & Smith, 1994, p. 7). Unfortunately, these authors are not alone in this opinion. The literature on students with (serious) emotional disturbance, commonly referred to in the literature as “emotional/behavioral disorders” (EBDs) is replete with pessimism. These include the bleak outcomes of this population, the paucity of appropriate services and resources available to them, wide research-to-practice gaps reflected in current school practices, problems in retaining qualified teachers, and a myriad of problems related to the underidentification, misidentification, and late identification of students for special services. While this state of affairs could be partially excused on account of the youth of this field, the need to improve the education and long-term outcomes of children with EBDs could hardly be more pressing. The suffering created by the onset of serious behavioral problems predicts pervasive and long-lasting challenges across the educational, social, emotional, cognitive, and vocational aspects of development from childhood through adulthood (Quinn & McDougal, 1998). Moreover, this hardship is not limited only to those youths diagnosed. Rather, caregivers, parents, peers, teachers, and greater society may all be burdened from contact with individuals with such disabilities (Quinn & McDougal, 1998). Without effective mental health interventions, behavioral patterns become more deeply entrenched and less responsive to even the most substantial treatments (Lane, Barton-Arwood, Nelson, & Wehby, 2008). Fortunately, from kindergarten to high school graduation, our nation's children spend more than 15,000 hours in school environments (even allowing for the occasional absence). Therefore, with the right
educational and mental health tools at their disposal, educators have the possibility to equip students with skills they need to navigate both their own internal challenges and those they will meet in the world around them (Sugai, Horner, & McIntosh, 2008).

What is EBD?

The federal definition used in American public schools today for emotional disturbance (ED)—previously known as serious emotional disturbance (SED) and emotional handicap (EH)—is over 35 years old and is based on work that took place more than a half a century ago. Initially adopted by Congress in the drafting of Public Law (P.L.) 94-142, "The Education for All Handicapped Children Act of 1975," the present definition was borrowed and refined from Eli Bowers' definition first proposed nearly 20 years prior in 1957 (Merrell & Walker, 2004). According to P.L. 94-142—which has since been renamed twice (first to the Individuals with Disabilities Education Act of 1997 (IDEA) and later to the Individuals with Disabilities Education Improvement Act of 2004 (IDEIA))—a student must meet at least one of five major criteria to a marked extent and over a period of time. These five criteria included:

(a) An inability to learn which cannot be explained by intellectual, sensory, or health factors; (b) An inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (c) Inappropriate types of behavior or feelings under normal circumstances; (d) A general pervasive mood of unhappiness or depression; or (e) A tendency to develop physical symptoms or fears associated with personal or school problems" (Section 300.7(b)(9)).

Furthermore, "[t]he term includes children who have schizophrenia. The term does not include children who are socially maladjusted, unless it is determined that they have an emotional disturbance.” (Section 300.7(b)(9)).
In addition to being referred to as SED, ED, and EBD, this constellation of mental illnesses (composed of various diagnoses) also appears in mainland Europe, the United Kingdom, Canadian, and Australian literature as serious emotional/behavioral disorder (SEBD) or its translated equivalent (Cooper, 2011a; Cooper, 2011b) and as Disruptive Behavior Disorder (DBD) (Petitclerc & Tremblay, 2009; Peticlerc, Boivin, Dionne, Zoccolillo, & Tremblay, 2009; Petitclerc & Tremblay, 2009). Most American professionals today use the term EBD (sometimes EBD) (Walker, Nishioka, Zeller, Severson, & Feil, 2000). Regardless of the vocabulary used to describe them, these various forms of mental illness are described by the 1999 report of the U.S. Surgeon General as part of the set of diagnosable health conditions or mental disorders which can be "characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning" which "contribute to a host of problems—patient distress, impaired functioning, or heightened risk of death, pain, disability, or loss of freedom" (U.S. Department of Health and Human Services, p. 5). The etiology of EBDs, like all mental illness, is best described as resulting from a complex interface among genetic, physiological, neurobiological, and environmental factors which result in changes to psychological and physiological states and behavior (American Psychiatric Association, 2000). EBDs range in severity along a continuum from relatively mild to severe. Yet, despite their placement along the continuum of symptoms, the symptoms of the behaviors and emotions present "interfere with the child's own growth and development" (Cooper, 2011b, p. 88). In the context of school functioning, EBDs are often defined operationally as "those behaviours that differ significantly and chronically from socially accepted norms, interfering with the learning of the individual and the class as a whole" (de Lught, 2007, p. 112). Additionally, in order to qualify, the presenting problematic traits of the disorder must be present over an extended period of time,
manifest themselves in more than one setting, be directed at more than one person, and are resistant to change from typical classroom management strategies alone (de Lught, 2007). By the very nature of the federal definition (specifically, criteria c and d), students diagnosed with EBDs experience significant difficulty attaining social acceptance according to typical school and community social norms (Clarke, Dunlap, Stitchter, 2002; Kern, 2008).

Who Has EBD?

Comprehensive nationally representative demographic data have been compiled from three longitudinal studies from the population of students receiving special education services under the federal disability category of ED. Each study was funded by the Office of Special Education Programs (OSEP) and are, namely, the Study of State and Local Implementation and Impact of IDEA (SLIIDEA), the Special Education Elementary Longitudinal Study (SEELS), and the National Longitudinal Transition Study-2 (NLTS2). These studies include data from hundreds of school districts and thousands of schools (Bradley, Henderson, & Monfore, 2004). About 80% (four-fifths) of elementary and middle school students and 76% (three-quarters) of high school students with EBDs are male (Bradley et al., 2004). In the elementary and middle school grades, about 57% of students are described as White, 27% as African American, and 13% as Hispanic. At the high school level, these proportions are only slightly different: about 61% white, 25% African American, and 10% Hispanic (Bradley et al., 2004). While these proportions did not change dramatically from 1987 to 2001, the percentage of students considered English-language learners (ELLs) did--increasing from 1.5% to 9% (a difference at the magnitude of p < .001) (Bradley et al., 2004). Just over 8% of students receiving special education services are eligible under the designation of ED (Bradley et al., 2004). Students with EBDs are more likely to come from single-parent families and to suffer from poverty,
homelessness, violence in the home, and parental substance abuse and mental illness (Knitzer, Steinberg, & Fleisch, 1991). On average, these students have generally been exposed to several risk factors that have contributed to their problems but, unfortunately, are identified and receive initial services later than students in any other disability category (Gagnon & Leone, 2006; Walker et al., 2000).

What Does EBD Look Like?

The population of students who are identified under the eligibility category of ED are a profoundly heterogeneous group of students. This, perhaps, is an expected outcome based on the nature of the federal definition of ED which encompasses various behavioral, emotional, and social problems (Cullinan & Sabornie, 2004). This disability category includes both internalizing and externalizing types of disorders, each presenting with potentially very different sets of symptoms. Additionally, Kern, Hilt-Panahon, & Sokol (2009) point out that various family and community risk (or protective) factors may be present to complicate or ameliorate symptoms. Therefore, problematic student behaviors can take a number of forms; they can be described as being either emotional (or behavioral) excesses (or deficits) (McDuffie, Landrum, & Gelman, 2008).

Excessive behaviors associated with EBD include those that are disruptive. For example, Deitz & Ormsby (1992) relate that students with EBDs engage in nearly three times as many "aggressive" verbal responses and twice as many disruptive noises per hour as “general classroom peers” (p. 513). Additionally, third, fourth, and fifth graders with EBD showed excesses in attention-seeking behaviors, making three times as many attempts to gain teachers’ attention and interacting with them more than four times as much as classroom peers (Deitz & Ormsby, 1992). Other excesses include both physically and verbally aggressive behaviors, and
acts of property destruction (McCurdy & McIntyre, 2004). Students with excessive behaviors are often referred to by teachers or in the literature by a number of labels summarized by Christiansen, Jenson, Olympia, & Clark, (2005) as "hyperactive, out-of-control, incorrigible, socially deviant, discipline problems, behavior problems, emotionally disturbed or behavior disordered, acting out, conduct problems, delinquency, antisocial behaviors, hard-to-manage, disruptive behaviors, or noncompliant behaviors" (p. 267). Excessive emotions may include becoming quick to anger or having intense feelings of hostility toward animals or others. Conversely, behavioral deficits may include problems in focusing attention, lack of involvement in academic tasks, noncompliance to teacher instruction, and social withdrawal (Kamps & Wendland, 2006; McDuffie et al., 2008). Finally, emotional deficits sometimes include apathy, lack of guilt or shame after committing horrible acts, or the absence of fear of punishment or in dangerous situations (Petitclerc & Tremblay, 2009).

Who is Harmed by EBD?

As mentioned earlier, problems brought on by EBDs have far-reaching consequences. Not only do they deeply impact the lives of the students diagnosed with them, but they burden their parents and caregivers, peers and teachers at their schools, and the societies in which they live. Beginning with the learners themselves, research continues to show how poorly children with EBD do within and after leaving school (Lewis, Jones, Horner, Sugai, 2010). Quite simply, these students have the worst social, educational, and post-secondary outcomes of any disability group (Sawka, McCurdy, & Mannella, 2002; Wiley, Siperstein, Bountress, Forness, & Brigham, 2008). This is true in both elementary and secondary students and for both males and females. These students tend to have academic deficiencies in all areas, have lower grade point averages, have histories of repeated failures, pass minimum competency exams at lower rates, miss more
school, have more social problems, and have greater risk for grade retention, drop out, and suspension and other disciplinary actions than students of any other disability category (Billingsley, Fall, Williams, Jr., 2006; Bradley, Doolittle, & Bartolotta, 2008; Hayling, Cook, Gresham, State, & Kern, 2008; Landrum, Katsiyannis, & Archwamety, 2004; Wehby, Lane, & Falk, 2003; Wiley et al., 2008). After finishing or dropping out of school, many of these students go on to have poor employment outcomes, problems with drug and alcohol abuse, a lack of social supports, and a high need for mental health services (Lane et al., 2008). Those who are most likely to become chronic offenders in terms of criminal behavior are those who do not receive appropriate interventions in a timely way (Bradley et al., 2008).

Intense behavioral problems by students have negative impacts on both school peers and school staff members. Such challenges present in the classroom can prevent teachers from doing their jobs effectively. This often creates a stressful and frustrating situation for them associated with various negative outcomes including low job satisfaction, attrition, absenteeism, burnout and illness (Billingsley & Cross, 1992; 2002). Furthermore, many of the classroom behaviors characteristic of students with EBDs cause disruptions to the learning environment that ultimately detract from the learning time and opportunities of other students. For example, Bradley et al. (2008) report that students with EBDs across all grade levels are more likely to behave violently at school than peers of similar grade level. Such students tend to require additional attention and energy from teachers and administrators, adding to their already challenging jobs and placing additional demands on their limited time.

Many youths with EBDs have difficulties developing and maintaining positive relationships with adults. They also have extensive needs, placing intense demands on caregivers. Parents and guardians of such children report high levels of stress and stress-induced
health problems, frequent work interruptions, difficulty in finding appropriate child care, challenges in balancing child care demands with other obligations, and lowered parental and marital satisfaction (Rosenzweig, Brennan, & Ogilvie, 2002). Certainly, parenting a child with severe emotional and/or behavioral needs is not easy and takes a continued toll on caregivers over time.

The social and financial burden created by minors with EBDs is staggering. Estimates of these impacts are often imprecise and do not take into account the full cost of the collective resources required by this population from educational, mental health, and social services, the criminal justice and legal systems, hospital and residential treatment facilities, and other agencies. Many of the behaviors these students engage in have subtle effects for which assessing financial cost is difficult. Examples of hidden costs inherent with EBDs include loss of parental work time or employment due to child rearing demands; acts of physical violence or property destruction may result in emotional and physical trauma to others, medical bills, or costs associated with property damage; the increased time teachers and administrators spend dealing with discipline-related issues reduces their ability to attend to more primary duties. Yet even disregarding these very real emotional and financial tolls, in 2009 the National Research Council and Institute of Medicine placed the annual price tag to society for youths with mental, emotional, and behavioral disorders at “$247 billion dollars without considering the emotional cost to these youth and their families” (Evans, 2009, p. 154).

How Prevalent is EBD?

There is substantial discrepancy among prevalence estimates for students with EBDs that is both problematic and confusing for the field. This has to do primarily with the way in which students are defined as having such disabilities. Estimates range from less than 1% of the school-
age population to 20% (or sometimes more) in other literature (Doll & Cummings, 2008; U.S. Department of Education, 2006). Those estimates at the lower range (i.e., 1% or less) refer to the number of students who are receiving special education services under the eligibility category of ED. This is a flawed estimate considering that millions of students can and do receive services under other eligibility categories while still having EBDs (Kauffman, 2001). Those statistics at the higher end tend to refer to the ratio of students who are diagnosed with any disorder from the Diagnostics and Statistics Manual of Mental Disorders (DSM-IVtr) although this does not necessarily mean they exhibit disruptive behaviors (U.S. Department of Health and Human Services, 2006). Consider that a student with severe depression may have a psychiatric diagnosis yet remain silent and subdued at school. Or, as Kern (2008) explains, “when one considers students who experience significant mental health issues that may be relatively transitory in nature, or may not rise to the level of adversely affecting educational performance, the number of students who experience emotional and behavioral difficulties widens exponentially” (p. 1).

Regarding the prevalence estimates cited in the literature, the more conservative the figure, the more severe the types of problems being identified. For example, although the British Medical Association (2006) agrees that 20% of young people can be said to have a mental health problem at some point in their development, they clarify that only half this number have symptoms so severe as to qualify as a “clinically recognisable mental health disorder” (p. 71). Furthermore, the generally accepted prevalence rate for EBD defined as being so severe that it impedes with daily functioning at home, school, or in the community was placed at between 3%-6% both by the National Mental Health Association in 2004 and Kauffman in 2001. This calculates out to between four and six million students—a staggering number of young people in need of immediate mental health intervention. Clearly this is no small problem and the literature
suggests that this problem is accelerating. Kauffman (2005) revised his estimate four years later to 5%-7%. If accurate, this would mean that between five and seven million students are affected (or one to three million more than the previous estimate).

No matter which type of statistic is consulted (i.e., the 20% of children with DSM-IVtr diagnoses vs. the 1% with special education eligibilities of ED), the prevalence rate of these students is rising dramatically (Kern, 2008; Sawka et al., 2002). In 1986, the Office of Technology Assessment reported the number of children and adolescents diagnosed with mental disorders was approximately 7.5 million (U.S. Congress). Twenty five years later, the number doubled to 15 million (Greenberg et al., 2001). This translates into an exponentially growing cost to society. Corroborating this finding, the U.S. Department of Education during approximately the same time period reported that the number of students receiving services under the eligibility category of ED (representing only a fraction of the actual EBD population), nearly doubled from about 250,000 in 1976 to approximately 500,000 in 2004 (U.S. Department of Education, 2006). In addition to rapidly increasing numbers of students identified with EBDs, several researchers contend that the intensity of these behavioral issues are becoming more intense. This suggests that the “average” student with EBDs today presents schools and communities with more challenging behaviors on average than his or her counterpart 25 years ago. Additionally, these authors contend that behavioral problems tend to grow more intense as students transition from childhood to adolescence (Couvillon, Bullock, & Gable, 2009; Epstein, Nelson, Polsgrove, Coutinho, Cumblad, & Quinn, 1993). Clearly, children's mental health needs are posing a problem for U. S. schools that cannot be ignored. Especially troubling is the fact that the need for services continually outpaces their availability and/or that many students either never receive
mental health services or fail to receive the appropriate ones. (Greenberg et al., 2001; Kazak, Hoagwood, Weisz, Hood, Kratochwill, Vargas, & Banez, 2010).

Importance of (Early) Prevention

The importance of intervening as early as possible with children exhibiting symptoms characteristic of EBD cannot be overstated. Early behavioral patterns are the most malleable and respond best to treatment. The longer emotional and behavioral problems remain untreated, the more ingrained they become in the individual—intensifying, diversifying, and multiplying along the way (Bradley et al., 2008; Hester, Baltodano, Gable, Tonelson, & Hendrickson, 2003). Early intervention is not only important for the welfare of the children, but also translates to substantial savings to society (Greenberg et al., 2001). Though expensive in the short-run, early intervention and prevention research has shown itself to be effective in saving money and resources over the long run (Kern, Hilt-Panahon, & Sokol, 2009). A meta-analysis reported by Kazak et al. (2010) of 177 prevention studies found, mean effects ranged from 0.24 (low) to 0.93 (high). Durlak & Wells (1998) reviewed 130 prevention studies and calculated a mean effect size in the 0.50s (small-medium). Lloyd, Forness, & Kavale (1998) reported early intervention to have a medium effect size of 0.65 (medium). Although these effect sizes do not appear especially impressive, the nature of the benefit from each year of intervention is cumulative. That is to say, a certain (relatively low) effect size might be found after two years’ intervention; had effective intervention continued for four year, six years, or eight years, the respective effect sizes would tend to increase. The research by Wood (1981) illustrates this finding. This author calculated the overall costs of providing special education services to age 18 from birth, age 2, and age 6. The result was that the total cost of all special services were actually smaller the earlier the services began. The cost when starting at birth was $37,273 and as high as $53,340 when not initiated until age 6 (Wood, 1981). This translates to a savings of 43% in total costs while at the same
time providing six additional years’ services. These findings about early intervention have been known for some time. A three-year follow-up study on early treatment for children with severe behavior disorders found that for every one dollar spent, seven were saved within three years (Snider, Sullivan, and Manning, 1974).

In addition to the sizable cost savings reported in the literature, many studies do not consider future outcomes. The sum benefit to society of steering troubled children away from troubled lives is impossible to calculate. For example, effective intervention during grades (pre) K-12 could change students' trajectories, potentially deterring them from countless problems during and after their school years including: grade repetition, need for more restrictive special education placements, later high school dropout, theft, graffiti, and other delinquency, increased acts of violence and/or abuse toward others, substance abuse, unplanned pregnancy, unemployment, and welfare dependency (Barnett, 2004; Lewis et al., 2010). Available research indicates that quality early intervention with young children is a sound economic investment (Barnett, 2004). Considering the cost of these problems to society, the savings recouped from mental health interventions preventing even one child (let alone tens or hundreds of thousands over the course of years) from falling into such outcomes is substantial. Clearly, neither educators nor policymakers can afford to ignore this need for early treatment.

Sacks and Kern (2008) report the high school drop-out rate for students with EBD exceeds 50%. In the same year, Cheney, Flower, & Templeton placed the figure between 51% and 55% (2008). This is the highest dropout rate of any disability population. Of those students who manage to graduate, most of them (58%) only do so with adjusted (as opposed to standard) diplomas (Cullinan & Sabornie, 2004). Yet as discouraging as the outcomes are for students with EBDs nationwide, the statistics are even more grim for Nevada. Here, the graduation rates are
especially low. The overall dropout rate is 24% greater than the national average (Washoe County School District [WCSD], 2010b). Compared with the national statistic of 45%-50%, only 19% of students with EBDs graduate from high school (Cheney et al., 2008; Sexton, 2010). This is less than half the national rate and significantly lower than those students in Nevada (or in any state) graduating with learning disabilities (27%) and intellectual disabilities (26%) (Sexton, 2010). This indicates an especially great local need for effective educational, behavioral, and mental health interventions for this population.

Local Challenges

Nevada has earned a reputation for having a population for whom education is not a priority. Nevada ranks first in the nation in high school drop outs (WCSD, 2010b). At the same time, it is 50th in the nation for its ranking of college graduates after four years of school and in the availability of appropriate jobs for college graduates (WCSD, 2010b). It is ranked 49th for the number of young adults with college degrees (WCSD, 2010b). Nevada is 3rd in the nation for employing drop outs which may be a function of the relatively high number of them in the area (WCSD, 2010b). This may also serve to bolster local opinions that education is not important. *The Wall Street Journal* cited Nevada as having the largest "Opportunity Gap" of any state. “Opportunity Gap,” in this context refers to the disparity between what it chooses to spend on essential government services (including education) and what it could afford to. Nevada was also rated as 50th in the nation in "Educational Quality & Funding" (WCSD, 2010b).

Specifically, in the Washoe County School District in Northern Nevada, there was a $37 million shortfall for the 2009-2010 school year as well as double-digit million dollar shortfalls during the previous few years for a total of a $73 million shortfall over four school years spanning from the 2006-2007 school year to the 2009-2010 school year (Washoe County School District [WCSD], 2010a). For the 2011-2013 biennium, the WCSD expected a $75 million shortfall for both school
years (WCSD, 2010a). These shortfalls exhausted reserve monies and are cutting heavily into Nevada's education budget, which has led to eliminating positions, increasing classroom sizes, postponing purchasing new educational materials, and cutting employee pay and benefits, (WCSD, 2010a). Even before these current funding problems, education was not shown to be a high state priority. In 2006, the per-pupil spending in Nevada was 27% lower than the national average ($7,213 versus $9,963) (WCSD, 2010a).

Nevada ranks high in student risk factors and low in child well-being indicators according to the Kids Count 2008 Data Book (Annie E. Casey Foundation, 2008). Overall, Nevada was at the 28th percentile (ranked 36 out of 50 states) in these areas. According to the 2012 State of America’s Children report, 144,204 (22.0%) of Nevada’s children live in poverty with 65,642 (10.0%) classified as living in extreme poverty. Furthermore, Nevada has some of the highest rates of child and adolescent mental illness combined with extremely limited access to mental health services. In fact, Nevada is one of five states in the U.S. with fewer than four child psychiatrists per 100,000 school age children (Sexton, 2010). All of these factors combine to create a distressing situation for Nevada, its schools, and its communities at large (Sexton, 2010). Therefore, Nevada is an ideal environment to test innovative approaches to helping students with EBDs in the schools for two important reasons. First, the need to implement effective, evidence based practices in the schools could hardly be greater. Second, Nevada may be an ideal research setting as it provides "a microcosm of our nation in terms of challenges faced by schools . . . [in] trying to produce positive outcomes for these students with EBD" (Sexton, 2010, p. 1)
Purpose of the Study

Introduction to the Comprehensive Student and Staff Support System

Briefly, the Comprehensive Student and Staff Support (CSSS) system is a multi-modal school-based intervention. It was developed by a transdisciplinary research team from the Washoe County School District (WCSD) in Northern Nevada and, at present, is in use exclusively in this area. The CSSS combines aspects of educational, behavior analytic, and mental health supports to simultaneously meet both the academic and behavioral/mental health needs of the students at whom it is directed and to the teachers who serve them. It does this through a structured framework of behavioral support for both students and staff. Extensive instruction and feedback are used to teach behaviors while praise and (for students) tangibles are used to build and shape desired behaviors, simultaneously extinguishing undesired ones (Sexton, 2011). Specific skill development for both students and staff is facilitated. Students work their way up a leveled system through compliance to teacher expectations and program rules (Sexton, 2011). Points are awarded for positive behavior and accompany verbal and tangible incentives given at regular intervals throughout the day (Sexton, 2011). The CSSS system was designed specifically in an attempt to target and improve social-emotional, behavioral, academic, and, ultimately, post-secondary outcomes for students with EBDs. Due to the children’s mental health crisis in Nevada as well as the significant financial, economic, and social costs incurred by youths with EBD, a study seeking to identify and describe effective educational interventions for this population is warranted.

In short, the purpose of the present study is to ascertain the degree to which the CSSS program has reached its stated goals for those students it serves in the WCSD. The study will use behavioral data to a) evaluate the extent to which undesired behaviors differed in desired
directions in this population and b) examine evidence, including standardized state test results to ascertain positive differences in academic functioning. The results of this study are intended to be informative to the WCSD and other districts seeking to implement or improve upon educational/emotional-behavioral/mental health interventions in the school for the treatment of students with various diagnoses or symptoms of EBD.

Necessity of Program Evaluation

In 1964, Siegel observed that "[m]easurement is science" (p. 11, as cited in Stitchter & Conroy, 2004). A quarter century later, Messick added that "science is measurement" (1988, p. 43). Therefore, educators, policymakers, and researchers cannot have meaningful dialog about science without appropriate measurements to inform them. In the present arenas of politically-driven educational reform, there is simply no substitute for, or way around, program evaluation. After all, the purpose of the No Child Left Behind (NCLB) legislation of 2001 is to "produce a high standard for program validation and ultimately adoption (Mooney, Denny & Gunter, 2004, p. 240). NCLB restricts schools to the use of programs which have been validated through empirical research (Mooney, Denny & Gunter, 2004).

Preliminary outcome data from previous years of implementation of the CSSS system in elementary social intervention programs has yielded positive results. These include evidence to suggest increased student achievement, appropriate demonstrations of behavior as well as staff competency, job satisfaction, and movement of staff toward self-sustainability. In short, initial and informal evaluations of the CSSS program portray this broad intervention optimistically. Yet, given the requirements of NCLB, this optimistic preliminary outcome data must be substantiated through more rigorous means. Even aside from purposes of NCLB, the financial crisis in Nevada including recent shortfalls in its educational budget makes the justification of
this program critical for ensuring its continuation. Implementation of any individual CSSS
program site requires several teachers and teaching assistants. Empirical data suggesting that the
CSSS system is a prudent use of district dollars will be needed to share with administrators under
pressure to cut expenses wherever possible. Finally, program evaluation is an important
obligation to those families relying on the school district to provide evidence-based and up-to-
date educational approaches to help their struggling children. As Steege, Mace, Perry &
Longnecker point out, the analysis of program data on a frequent basis allows school teams to
"clearly evaluate the efficacy of interventions and, when necessary, to make modifications to
programs to enhance their effectiveness or to begin to withdraw intervention components that are
no longer needed" (2007, p. 93). The present program evaluation seeks to follow this
recommendation. This study may be an invaluable tool in providing feedback to the WCSD and
other districts intending to use similar programs in the treatment of students with diagnoses.
Through a thorough investigation of program outcomes using sound methodology, information
will be gleaned to drive and inform refinements and improvements.

Research Questions

Two main research questions posed by this study are intended to answer the following
overarching one: "Does the CSSS system demonstrate adequate efficacy in meeting its mission
of improving outcomes for those students it serves?" They are as follows:

1. Is there a desirable difference in undesired student behaviors across the 2011-2012 school
   year?

2. Is there a desirable difference in student academic performance across the 2011-2012
   school year?
Significance of the Study

A study evaluating the effectiveness of the CSSS holds potential to help improve outcomes for a population of students who have traditionally had the poorest outcomes of any student disability group (Sacks & Kern, 2008). Specifically, Maggin, Robertson, & Oliver et al. (2010) cite recent research suggesting that students with EBDs have academic achievement that is notoriously stagnant. That is, research has shown that their "pervasive" deficits in academic skills remain stable over time (p. 308). Binder (1996) recommended arming teachers with the scientific methods to "transform classrooms into places for data-based discovery, fully integrated with educational practice" (p. 168). Training teachers to implement the CSSS program with fidelity could contribute to that end. Additionally, Montrose Wolf, over thirty years ago, recommended behavior analysts apply their work to "problems of social importance" (1978, p. 208). Improving students' ability to function in their homes, schools, and communities, increasing graduation rates, and promoting quality of life qualifies as issues of social importance. Finally, an intervention which stands to improve the educational and post-secondary outcomes for this population stands to save society a great deal of money.

As Governor Bob Wise, president for the Alliance for Excellent Education 2010 put it, "The best economic stimulus package is a high school diploma." Specifically, in the state of Nevada, an improvement of the male graduation rate of 5% would translate to a contribution to its economy of $78 million or more (WCSD, 2010b). Because about three-fourths of the secondary EBD population is male, an improvement in this group could help contribute to this improvement in graduation rate (Bradley, Henderson & Monfore, 2004). Moreover, a high correlation exists between dropping out of high school and outcomes such as unemployment, homelessness, and criminal activity (WCSD, 2010b). High school dropouts earn $260,000 less in
their lifetime than high school graduates. On average, each high school dropout burdens society with a cost of $209,000 from costs associated with welfare, healthcare, and crime (WCSD, 2010b). Research indicates that early intervention is highly cost effective overall when weighed against the alternative (i.e., an absence of acute and targeted interventions) (Greenberg et al., 2001; Trout, Epstein, Nelson, Synhorst, & Hurley 2006; Wiley, Siperstein, Forness, Brigham, 2010). Should program evaluation of the CSSS system demonstrate that it can help these students make progress in the areas of both academics and behavior in the course of a single school year, it will have proven itself to be a prudent use of district resources.

Additionally, this study may be significant due to its capacity to inform other school districts about the efficacy of the CSSS system. Because this intervention is a well-organized and thoroughly outlined program, it can be replicated in other educational institutions. The CSSS was developed by integrating techniques drawn from the best practices literature and from empirical research across several overlapping fields including applied behavioral analysis, education, and the mental health fields. Additionally, because of the methodological strengths of Applied Behavior Analysis, it is compatible with the public health model. Lutzker (2005) recommends applying behavior analytic approaches in "macropopulation levels in settings such as social services, schools, and the workplace" to attain targeted outcomes (p. 575). Thus, the CSSS program holds potential to be an effective tool for improving academic and behavioral outcomes for a population of children with considerable needs.

If results from the present study show the CSSS system to be effective in treating the elementary EBD population, it could validate its use in the WCSD, serve as a resource for other districts, and add to the body of evidence-based practices for this population. The national mandate for schools to improve educational achievement in each area of its student demographic
may prompt districts across the country to adopt the CSSS if it is found to be useful toward this end. Conversely, if the present study shows that this program is not effective, such would be valuable information. The conclusions drawn from the study may inform the WCSD in terms of revisions or recommendations which may be beneficial.

Finally, the results from this study will constitute a significant addition to the current knowledge base in the treatment of children with EBDs. The results of this study promise to become an important contribution to the knowledge base in the treatment of EBDs. After all, while ABA research has been "vibrant and expansive" for persons with developmental disabilities, recent research has neglected to target persons with mental health problems, including EBD (Harvey, 2009, p. 212). Other researchers point out that the research base for school-age youths with EBDs and at least average behavior is very poor (Iwata & Worsdell, 2005). As WCSD school psychologist Dr. Betsy Sexton puts it, “this leaves the field wide open in terms of applying behavior analytic technology and then empirically researching its effects” (Sexton, 2010). Therefore, this study will serve to supplement an important but sparse area of literature.

**Assumptions**

Throughout the course of this study, the researcher will be making the following assumptions:

1. It will be assumed that the data collected regarding student behaviors is valid and accurate.
2. It will be assumed that scores on Math and Language Arts benchmarks reflect the students’ best efforts.
3. It will be assumed that the students attending the CSSS programs belong to the population of youths with EBDs. This assumption is important due to the reality that educational
placement is not a result of any particular specific medical diagnosis or qualification for any special education eligibility category. Therefore, while some students will be receiving special education services under the eligibility categories of autism, health impairment, learning disability, or others, they will all have an important characteristic in common; all students attending the CSSS programs will have been deemed by multidisciplinary teams of educators to have emotional, behavioral, and/or mental health needs that are severe enough to necessitate the level of support and supervision provided at this placement. Thus all students enrolled in the CSSS program for the majority of the school year will be included in this study. Therefore, whether or not any documentation regarding presence of EBD exists, it will be assumed that these students could qualify (and thus, legitimately belong to the EBD population) for such a diagnosis by a qualified professional.

**Definition of Terms**

Desired behaviors: This term refers to any of the desired student behaviors which are recorded on all students’ daily point sheets. Following are all of the specific behaviors which comprise this category: On-Task, Accepting Criticism, Accepting “No,” Problem-Solving, Peer Cooperation, Ignoring, Disagreeing, Transition, Teacher Attention, Following Instructions, Calm Person, Manners, Work Completion, and Home Note.

On-Task (OT): Students have the opportunity to earn these points during each of the 13 fixed interval half-hour time blocks throughout a typical full day of school. If the student is working productively, he or she is considered as being “On-Task.”

Accepting Criticism (AC): A student who accepts critical feedback well: a) listens to feedback from a staff member, b) addresses the concern, and c) calmly resumes work or the expected behavior.
Accepting “No” (AN): A student who remains calm in spite of being told that he or she is not allowed to do something is demonstrating this skill.

Problem-Solving (PS): A student who demonstrates this skill uses at least part of the problem-solving process explicitly taught to students in order to arrive at feasible solutions. This process entails: a) pausing, b) taking deep breaths, c) considering alternate viewpoints, d) brainstorming potential solutions, and e) voicing or executing this strategy.

Peer Cooperation (PC): A student demonstrating this skill behaves in a collaborative or socially desired fashion in some joint activity with at least one other student.

Ignoring (IG): This behavior refers to withholding attention to peers’ undesired behaviors.

Disagreeing (DI): Students who disagree properly first attain attention from a staff member in an appropriate fashion and then calmly explain the rationale for their disagreement.

Transition (TR): This behavior requires students to a) place their heads on their desks, b) remain silent, and b) prepare for an upcoming activity.

Teacher Attention (TA): Students who appropriately seek the attention of a staff member must: a) raise their hands, b) sit erect in their seats with feet under their desks, and c) wait quietly to be called upon.

Following Instructions (FI): Students demonstrating this skill comply with the instructions of staff members without objection.

Calm Person (CP): A student is deemed to be exhibiting this behavior when a) facing forward with feet under the desk, b) working quietly, or c) having his or her head placed down on the desk.
Manners (MA): A student may earn points in this category by demonstrating a number of behaviors of good etiquette, including saying “please,” “thank you,” or issuing appropriate compliments.

Work Completion (WC): This term refers to the amount of work a student completed during a given class period. Completion of less than one-half of the expected work results in a score of "0." One-half to three-fourths of work completed results in a score of "3." When all or more than three-fourths of all of the expected assignment is completed, the student earns the maximum score of "6." The classroom teachers use their judgment to ascertain what score is most appropriate to assign to each individual student on a case-by-case basis.

Home Note (HN): Student home notes are booklets used by the program to facilitate communication across the school and home settings. Students are responsible for delivering the home note back and forth from school to home in order to get guardian signatures; this allows the children’s adult caregivers to read any notes left by school staff, process these with the child, and make notations themselves to communicate in response to staff.

Undesired behaviors: This term refers to any of the undesired student behaviors which are recorded on all students’ daily point sheets. Following are all of the specific behaviors which comprise this category: Blurting, Out of Seat, Verbal Aggression, Physical Aggression, Property Destruction, Destruction of the Point Sheet, and Stealing.

Off-Task (OT): This behavior applies to any student not engaged in the expected or assigned activity.

Blurting (BL): A "Blurt" refers to an undesired verbalization by the student which is either disruptive or made without permission from a staff member. Subsequent BLs are defined as recurrences of such verbal behaviors (e.g., yelling, talking, making noises) after a five second
cessation which separates the latter from the former incidence. In other words, a string of noises that lasted several seconds would still be considered a single BL; additional noises after a five second pause would be counted as a separate incidence of BLs.

Out of Seat (OS): A student is exhibiting this behavior if his or her bottom leaves the chair by more than six inches without permission. Each minute of such behavior is deemed as one instance.

Verbal Aggression (VA): Such behavior includes: a) threatening language, b) gang talk, c) foul language, or d) otherwise offensive language. Subsequent VAs are defined as recurrences of such verbal behaviors after a five second cessation which separates the latter from the former incidence. In other words, a string of profanities that lasted several seconds would still be considered a single VA; additional profanities after a five second pause would be counted as a separate incident of VA.

Physical Aggression (PA): PAs tend to refer to aggressive physical behavior which demonstrates intent to harm another individual or oneself. Behaviors include: hitting, spitting, biting, throwing objects, punching, kicking, pushing, head-butting, choking, or the use of weapons. PAs may also include excessive property damage, the use of violent gestures, or attempting to put oneself in danger. Each five minute interval of such behavior is deemed as a single instance. This is the only category of student behavior for which staff may deem it necessary to apply physical restraints against the student to ensure safety.

Property Destruction (PD): Students are determined to be demonstrating this behavior when they willfully cause damage to any school property.

Destruction of Point Sheet (DP): Students who purposefully inflict damage to their own point sheets are demonstrating this behavior.
Stealing (ST): This behavior refers to instances of theft from the school or from others.

Point sheet: This refers to the daily behavioral point sheet used for the purposes of both documenting and shaping student behavior.

MAPs assessment: This refers to the Measures of Academic Progress computer-based Mathematics and Reading tests developed by the Northwest Evaluation Association and used by the WCSD as a means of benchmarking student academic progress.

Limitations

Several limitations exist that must be considered when interpreting the results of this study. Regarding the accuracy of the thousands of data points collected by WCSD staff members to be analyzed, there are likely some errors present. Both errors of omission as well as errors of commission are expected. Errors of omission are likely to exist because it is not feasible to expect that every single instance of pro-social and undesired behavior for each student was observed in every CSSS program classroom during each school day for the time analyzed. Furthermore, it is difficult to ascertain the extent to which this is likely to occur across the various school sites. Individual staff members at certain sites may commit more errors or more errors of a particular kind than staff members at other sites. Errors of both omission and commission may occur due to the inherent element of subjectivity that is involved in implementing program procedures. This factor of individual judgment may result in both marks on student point sheets due to false positives (i.e., errors of commission) or failures to mark point sheets due to false negatives (errors of omission). Bias toward the students could likewise effect how staff members mark point sheets. Furthermore, differences in program implementation based from subjective judgment are likely to originate from a number of factors unique to each individual staff member. These include but are not limited to: different interaction styles with
students; personalities; values; variations in academic and behavioral expectations for students; perceptual awareness; and background experiences. Similarly, some variation may be expected regarding the ability of staff members to mark point sheets every five minutes. Interfering events (e.g., an unanticipated fire alarm) or difficulties in keeping precisely to this schedule (e.g., losing track of time) may result in oversights or inaccuracies which can compromise the accuracy of data. Given these limitations, it is assumed that errors in either direction are random (not systematic).

Another limitation to this study is created by the characteristically transient nature of the student population being studied. This translates to either one or both of the following conditions occurring: a) a student will be enrolled late in the school year late and decrease the amount of time with which behavioral differences may be expected to occur (resulting in lost data from the first or, perhaps, second quarter), or b) students will leave the school year early (resulting in missing data for a later portion of the school year which would have contained meaningful information) and make Fall to Spring pre-post analysis impossible. Such transiency will result in some sample size attrition.

Students enter these CSSS programs based on Individualized Educational Program (IEP) team decisions which can take place at any point during the school year. This means that students who start the year in these programs may already be veterans of the program. Having already spent time in a behavioral program, the behaviors they display at the beginning of the school year may already reflect a great deal of improvement compared with their functioning at first enrollment during a previous school year. Conversely, data from students who come new into program (whose baseline data would be especially valuable) might not be used if excluded due to insufficient attendance for the respective school year. Many of the students who are
placed for the first time in a CSSS programs often are placed late enough in the school year such that they will be excluded. This is often a result of the typically lengthy process that teachers, parents, and administrators engage in before deeming such a placement appropriate for a student. This is because students, under special education law, are guaranteed an education in their Least Restrictive Environment. Reasonable steps must be taken by school staff on a student’s behalf to support him or her in the general education environment before it is decided that a more restrictive environment is warranted. Normally, several weeks or, more typically, months will be invested in trying out various interventions that do not require a complete change of educational placement. This means that by the time this process is complete and students’ placements are changed, it could be at any point during the academic year. For this reason, data will be analyzed for trends as much as for significant differences.

Students who graduate from the program’s leveled system will be moved back into the general education environment. Behavioral data will no longer be available for this subpopulation. In many cases, these students will graduate before attending enough of the 2010-2011 school year to be eligible for use in the study. This is a limitation in that it will bias the data to reflect less improvement than is actually occurring. That is, those students who benefit the greatest from the CSSS program will either a) be excluded from contributing to the study's data set due to insufficient attendance during the respective school year, or b) will have no data available for the 4th quarter of the school year when these CSSS program graduates would be demonstrating a great deal of pro-social behaviors in their general education (and resource) classrooms.

Another limitation from this study is related to the ability to generalize the results to geographic populations outside of Northern Nevada. An argument can be made to suggest that
several idiosyncratic political and cultural factors are present in Northern Nevada (e.g., the lack of available mental health care outside the school system, the present crisis in the educational budget, the degree to which youths with EBD have higher drop-out rates in Nevada than in other states, the high number of mental health disorders in Nevada, the relatively low funding for public education before or after the present recession, etc.). These factors may contribute in ways that are subtle and difficult to anticipate the impact that the CSSS program has on this group of students. They may be more or less likely to improve as a result of this intervention within a single school year than students with EBDs in other areas. For example, because of the paucity of resources available to them in the community, students with EBD in Nevada attending a CSSS classroom may make more marked progress than their counterparts in other communities because this school-based mental health intervention is more likely to be the only service they are receiving. Other students may demonstrate slower or less drastic growth due to a ceiling effect that may occur if simultaneously benefitting from other forms of treatment. Alternatively, factors contributing to the “anti-education” culture in Nevada could potentially make students enrolled in CSSS programs more resistant to change than their counterparts living in more education-friendly communities. The effects of such variables are difficult to predict.

A final limitation from this study is caused by the likelihood that the students enrolled in the CSSS program may be exposed to other interventions, programs, and services. These may include those from educational, therapeutic, and medical milieus. In particular, most of WCSD elementary schools include a strong emphasis on Positive Behavior Support (PBS), the behavioral arm of a larger intervention framework, Response to Intervention (RTI). This could potentially affect both the generalizability of this study’s results to other districts as well as the ability to compare progress across WCSD CSSS sites (due to variability in implementation of
PBS across the school district). Furthermore, with regard to any growth demonstrated by students in this study, the impact of other simultaneous interventions used with these children cannot be ruled out.

**Delimitations**

This study will only involve elementary students enrolled in self-contained special education programs ranging from kindergarten to grade 6 in the Washoe County School District in Northern Nevada.

**Hypotheses**

Ha1: A desirable difference will be present in the mean student incidence of students’ aggregated desired behaviors across the four quarters of the 2011-2012 school year.*

Ha2: An desirable difference will be present in the mean incidence of students’ individual desired behaviors across the four quarters of the 2011-2012 school year.*

Ha3: A desirable difference will be present in the mean student incidence of aggregated undesired behaviors from baseline to the fourth quarter of the 2011-2012 school year.

Ha4: A desirable difference will be present in the mean student incidence of individual undesired behaviors from baseline to the fourth quarter of the 2011-2012 school year.

Ha5: An desirable difference will be present in the mean Reading assessment scores for third through sixth grade students across the Fall, Winter, and Spring administrations during the 2011-2012 school year.

Ha6: An desirable difference will be present in the mean Math assessment scores for third through sixth grade students across the Fall, Winter, and Spring administrations during the 2011-2012 school year.
*Data for student incidence of desired behaviors was not recorded or not recorded consistently by the SIP sites; therefore such data was not a part of this research evaluation study and these hypotheses cannot be tested.
CHAPTER II: REVIEW OF RELATED LITERATURE

Underpinnings and Influences in EBD Education

The field of EBD is relatively young and draws heavily from its parent discipline of psychology which itself did not emerge as an individual discipline until the late 19th century. William James became known as the Father of American Psychology during about the same period Sigmund Freud began the psychoanalytic movement in Western Europe. Yet it was not until the early 20th century when the idea of mental illness finally emerged (Early & Poertner, 1993; Petr & Spano, 1990). Before this, youths displaying troubling behaviors were simply referred to as "dependent or delinquent" (p. 232). Disordered behavior in youth did not officially receive proper attention until the establishment of child guidance clinics in the 1920s. Over the following decades, the number of youths placed in mental health facilities grew rapidly (Early & Poertner, 1993). Most notably, the number of such hospitals and treatment centers soared from 11,000 in 1950 to 35,000 in 1970 (Petr & Spano, 1990). This trend also reflects a paradigm shift which took place within the mental health field; that is, professionals came to believe that acute childhood behavior problems warranted mental health intervention as opposed to legal punishment and exclusion through placement in detention facilities. Beginning with the child guidance clinics in the 1920s and continuing through the efforts of mental health experts such as Adolf Meyer, a strong emphasis on prevention emerged. Early detection efforts were combined with regular outpatient treatment for children affected with EBD (Petr & Spano, 1990).

History and Historical Influences

The discipline of behavior analysis was pioneered by B.F. Skinner in the 1930s. Since its inception, this branch of psychology, also referred to as Applied Behavior Analysis (ABA), has reinforced its value through several decades of research (Harvey, 2009). Its techniques, including
positive and negative reinforcement, punishment, Functional Behavior Analysis (FBA), Functional Analysis, token economies, time-out, planned ignoring, and others have been applied to various disability populations and across mental health institutions, community-based facilities, and schools (Harvey, 2009). By the 1960s, ABA had become a routine approach in the early intervention and treatment of developmental disabilities and severe behavior problems in several environments (Couvillon, Bullock, & Gable, 2009).

In the 1970s, school psychologists became prominent and began working in tandem with guidance counselors and social workers. During this time, schools were not expected to bear responsibility for students' mental well-being. Policy makers believed that students with emotional or behavioral concerns should receive services through community agencies. Mental health needs were regarded as separate from educational needs; thus, students' families and public or private therapists were expected to address this issue (Doll & Cummings, 2008). Typically, school psychologists, counselors, and social workers provided guidance and limited support to relatively typical students while referring those with more acute needs to the community for professional or psychiatric care (Doll & Cummings, 2008). However, the signing of IDEA (Public Law (PL) 94-142 formerly known as “The Education for All Handicapped Children Act”), heralded the beginning of a paradigm shift toward increased school-based mental health intervention which continues to this day (Knitzer, 1991).

Legal and Political Influences

Since this landmark legislation, legal and political influences have shaped the way that education has dealt with students exhibiting exceptional emotional and behavioral needs. Past biases that schools need not address the mental health needs of students with EBD have been met head-on with several pieces of legislation and actions by professional organizations that
challenge this notion. Trout, Epstein, Nelson et al. (2006) summarize many of the political influences which have spurred this paradigmatic shift:

Numerous funding agencies (e.g., Office of Special Education Programs), legislative actions (e.g., No Child Left Behind Act, National Agenda for Achieving Better Results for Children and Youth with Serious Educational Disturbance [U.S. Department of Education, 2006]), and advocacy groups (e.g., National Association of School Psychology and Council for Exceptional Children) have called for the creation, implementation, and evaluation of early intervention and prevention programs to prevent long-term educational and social failure in children at risk for BD (p. 206).

Public Law 94-142 was reauthorized in 1997 and included guidance regarding functional behavior analysis and the use of positive behavior intervention plans. Although somewhat unclear about what constitutes best practice in either area, it is clear that the writers of this document intentionally drafted it from a behavior analytic perspective (Gresham, McIntyre, Olson-Tinker, Dolstra, McLaughlin, & Van, 2004). This legislation helped increase ABA practice in schools across the nation and helped equip teachers to implement ABA techniques in the classroom. Both teacher preparation programs and school districts responded by training pre-service and in-service teachers to use techniques suitable for school environs. A few years later, the No Child Left Behind (NCLB) Act of 2001 (which amended the Elementary and Secondary Education Act of 1965) and the reauthorization of IDEA in 2004 served to set clear expectations and precedents for the development of positive behavior supports (including the use of PBIPs and FBAs). Students with social, emotional, and behavioral deficits were cast as fully under the jurisdiction of schools in terms of providing appropriate interventions and supports to promote their mental health (Knoff, 2008).
IDEA, reauthorized in 2004 to The Individuals with Disabilities Improvement Act (IDEIA) retained its original focus but was specifically designed to align with the NCLB. Together, these pieces of legislation created new standards for program adoption and precedents for school-wide reform (Mooney, Denny, & Gunter, 2004). Under these acts, educational programs adopted by schools must have "demonstrated records of success" through rigorous empirical research (Mooney et al., 2004, p. 240). Furthermore, NCLB increased special education teacher requirements so they were required to meet criteria to become "Highly Qualified" in each core academic area they teach (Billingsley et al., 2006). This represented a substantial tightening of standards; historically, licensed special education teachers with generalist endorsements were able to teach all subjects without additional certification. This new requirement was in addition to the expectation that teachers would hold full certification—a requirement waived by state departments for many special educators not in compliance (Billingsley et al., 2006). Oliver & Reschly (2010) suggests that these federal laws emphasized the importance of teacher quality as imperative in "improving achievement, prevention of learning and behavioral disorders, and attaining broad outcomes such as school completion and positive early adult participation in education and careers" (p. 197). Therefore, NCLB and IDEIA represent two powerful political influences involved in shaping educational reform affecting students with disabilities, including those with EBD.

The on-going recognition of the "critical role that promotion, prevention, and early intervention efforts play in enhancing children’s social, emotional, and academic functioning" as well as the growing prevalence rates of mental illness in school populations contributed to bringing this urgent need to the forefront of educational reform as addressed through the IDEIA and NCLB legislations (Osher, Sprague, Weissberg, Axelrod, Keenan, Kendziora, & Zins, 2008,
p. 1271); it should be noted, however, that improving services for youths with EBD had been one of the original priorities of the Bureau of Education for the Handicapped (now known as the Office of Special Education Programs (OSEP)) in the mid-1960s. Together, these reforms symbolized the gathering momentum to improve outcomes for exceptional student populations and can be considered responsible for creating high stakes for achievement, mandating the use of evidence-based practices, increasing schools’ accountability and promoting data-driven approaches in instruction and evaluation (Bradley, Henderson, & Monfore, 2004; DiGennaro, Martens, & Kleinmann, 2007; Reinke, Stormont, Herman, Puri, & Goel, 2011; Stichter & Conroy, 2004). The mandates from NCLB and IDEIA set high expectations for all students; with no exemption made for those with significant social, emotional, and behavioral needs (Knoff, 2008). In fact, IDEIA mandates the use of FBA, Positive Behavior Supports (PBS), and mental health services for students determined by multi-disciplinary teams to need behavior supports. In short, this act requires that school programs address social, emotional, and behavioral barriers to learning the same way the Americans with Disabilities Act (ADA) requires accommodations be made to those with physical limitations (Adelman & Taylor, 2000; Couvillon et al., 2009; Gresham et al., 2004; Murdock, O'Neill, & Cunningham, 2005). Gagnon et al. (2006) explains that self-contained special education programs, such as the elementary level Social Intervention Programs (SIPs) implementing the Comprehensive Student and Staff Support (CSSS) system in the WCSD, are completely compatible with the requirements of IDEIA and NCLB. Experts in the field agree that such special education programs are appropriate specifically because they meet the unique needs of this challenged population of students. For example, SIPs offer a high staff-to-student ratio and varied levels of restrictiveness in direct response to students’ present levels of social, emotional, and behavioral functioning (Gagnon & Leone, 2006). In 2006, the
U.S. Department of Health and Human Services, Health Resources and Services Administration added that "Special education classrooms always are (sic) supposed to have a constant focus on mental health concerns" (HRSA, 2006, p. 12). To summarize, the growing incidence rates of EBD combined with a number of legal and political movements have transformed the educational system's response to the needs of students with EBD from "federal investments [for] asylums for the insane" to developing (at a frenetic pace) high-quality programs and services for them (Bradley, 2004). At the same time, legislation has sanctioned the use of ABA techniques originally used almost exclusively in community and residential settings. The results of these movements are expanded roles for personnel such as school psychologists and school counselors who previously operated in more peripheral or superficial ways with regard to mental health intervention.

*Development of EBDs*

As previously mentioned, the population of youths with EBD is heterogeneous. Not only are there a multitude of potential symptoms that fall under the umbrella as either emotionally- or behaviorally-maladjusted, but these symptoms may or may not develop in response to a diverse range of biological, genetic and environmental risk factors (Rutter, 2003). As numerous studies involving twins and adoptees conducted over more than 60 years suggest, human behavior appears to be caused in equal amounts by genetics and environment (Comings, 1997). Conversely, protective factors operate to fortify individuals against these risk factors, reducing the impact of risk factors if not preventing the onset of such disorders altogether. Thus, both are important in understanding the etiology of EBD. Following is a summary of factors identified in relevant research literature as contributing to biological, genetic, and environmental risk and protection.
Biological and Genetic Risk Factors

A powerful risk factor by itself is that of the child's gender. This observation is based on the fact that boys outnumber girls three-to-one in rates of EBD (van Bokhoven, Matthys, van Goozen, & van Engeland, 2005; Lewis, 1988; Petitclerc & Tremblay, 2009; Rutter, 2003). Thus, it could be said that simply being born male makes boys 200% more likely to develop EBD as girls. Intelligence, partly determined by one's genetic make-up, can function either as a risk or protective factor. The construct of IQ was identified to be "an inverse predictor of antisocial outcomes over 10 years or more" (van Bokhoven et al., 2005, p. 14). Particularly, having a considerably lower verbal IQ (VIQ) than performance IQ (PIQ) is a risk factor for developing a particularly volatile and impacting form of EBD in terms of prognoses known as Disruptive Behavior Disorder (DBD) (van Bokhoven et al., 2005).

Various neurological factors create a proclivity toward EBD as well. For example, children with low levels of the hormone cortisol tend to behave more aggressively than typical counterparts (van Bokhoven et al., 2005). Differences in one's autonomic nervous system may have similar effects. Just as temperaments vary among infants, some individuals have differences in heart rate and skin conductance activity. Lower baseline levels of activity in these areas predispose children toward fearlessness (van Bokhoven et al., 2005). Because natural biological responses in these children fail to produce feelings of fear, these children tend to develop behavioral patterns toward social delinquency and other behaviors. These are habits which other children are naturally shaped away from due to their own fear of incurring punishing consequences (van Bokhoven et al., 2005). It may also lead to a "lack of conscience development," further predisposing children to committing antisocial and violent acts (van Bokhoven et al., 2005, p. 154). Finally, a risk factor for EBD which may result from a
combination of genetic, biological, and environmental variables is that of childhood chronic illness (van Bokhoven et al., 2005). Experiencing severe pain and limitation is a highly stressful situation, both physically and emotionally.

Environmental Risk Factors

Environmental risk factors are just as numerous, diverse, and potentially destructive as genetic and biological ones. The SES of the mother was found to be an inverse predictive factor for antisocial behavior (van Bokhoven et al., 2005; Petitclerc & Tremblay, 2009). Children who are separated from parents due to death or (more commonly) divorce are often left seriously impacted (van Bokhoven et al., 2005; Lewis, 1988). Death and divorce are events in the lives of children that require significant adjustment and inflict considerable psychological stress (Lewis, 1988). Additionally, children from single-parent families are more likely to develop EBD. Factors such as higher rates of poverty and, in many cases, experiencing stressful family transitions (e.g., divorce, separation) contribute to this (Walker, Nishioka, Zeller, Severson, & Feil, 2000).

Recent literature suggests that exposure to parental rejection is highly damaging to children and can lead to the development of attachment problems, including Reactive Attachment Disorder which can be profoundly destructive to the lives of those diagnosed as well as those around them (Petitclerc & Tremblay, 2009). Along the same vein as rejection are the risk factors of neglect and abuse, which can include physical, emotional, and sexual. van Bokhoven reports that these conditions often trigger conduct disorder, antisocial personality and tendencies toward criminal and violent behaviors (2005). All forms of parental rejection, abuse, and neglect are highly damaging and often the victims' life trajectories are permanently altered by the psychological scarring that results. Gagnon & Leone (2006) report that over 50% of
youths found to have experienced severe emotional damaged had suffered from abuse by parents or adults in the home. Excessive school transiency has also been identified as a risk factor as it contradicts consistency, leads to discontinuity in educational services, and brings about frequent changes in staff (Hayling et al., 2008). Homelessness, as well as childhood involvement with juvenile justice and foster care systems are also highly associated with EBD for a variety of interrelated reasons (Gagnon & Leone, 2006; Knitzer, 1991). Finally, likely due to a combination of environmental risk factors including statistically higher rates of single-parenthood, poverty, non-completion of high school, involvement with criminal justice systems, etc., African-American children are consistently overrepresented in the EBD population in schools (Hendrickson, Smith, & Frank, 1998). However, regardless of ethnicity, Knitzer summarizes that all children with EBD are "disproportionately victims of poverty, parental substance abuse, violence, . . . mental illness, and . . . homelessness" (1991, p. 102).

Children who are raised by parents demonstrating depressive symptoms or antisocial symptoms were also shown to have poor prognoses in terms of developing similar symptoms (though some genetic influences are likely responsible for this as well) (Petitclerc, 2009). Sameroff, Seifer, and Zax (1982) state that of all the types of mental illnesses parents may have, the worst outcomes were found in children with neurotic-depressive mothers. These children fai red even more poorly than those with mothers diagnosed with schizophrenia or personality disorders (Sameroff et al., 1982). Regardless of specific parental diagnosis, however, numerous studies have identified significant relationships between maternal functioning and risk of EBD development in offspring (Early 1993).

Exposure to harmful substances is another particularly damaging environmental risk factor. Cigarette smoking, alcohol use, exposure to toxins (e.g., lead paint) or the abuse of other
chemical substances during pregnancy are all cited as causal factors leading to various deleterious fetal effects which set the stage for EBD (van Bokhoven et al., 2005; Lange et al., 2005; Petitclerc & Tremblay, 2009). Children who become substance abusers themselves likewise place themselves at risk for this disorder (Sutherland & Morgan, 2003). In addition to these, there are numerous other risk factors that place children in jeopardy for EBD. Crews et al. (2007) list several others including: lack of bonding to school, having delinquent peers, internal and external disorder comorbidity, prior antisocial behavior, low academic achievement, diagnosis of learning disability, exposure to violent video games and media, being of a rejected sociometric status (social ranking among classroom peers), and having a chronically ill sibling. Interestingly, corporal punishment of children by parents is a risk factor for developing internalizing disorders but a protective factor against externalizing disorders (Crews et al., 2007).

Protective Factors

Crews et al. (2007) define protective factors as "variables that reduce the likelihood of maladaptive outcomes given conditions of risk" (p. 65). Drawing from a large body of research, these authors provide a concise account of the four different ways that protective factors may work, whether in isolation or tandem:

(a) directly decrease dysfunction, (b) interact with risk factors to buffer their effects, (c) disrupt the mediational chain by which risk leads to disorder, or (d) prevent the initial occurrence of risk factors (p. 66).

In the same way that reinforcers and punishers are distinguished on the basis of their effects on the probability of the occurrence of future behavior, risk and protective factors are identified by their respective impact on the probability of future positive and negative outcomes.
The more protective factors present, the better the resistance afforded against risk factors. Additionally, the strength of protective factors is increased when they are present across different contexts for the child (Crews et al., 2007). For example, the presence of supportive, caring role models is a helpful protective factor when available in the child's home and even more powerful when such individuals are also at school and in the community. Klassen & Anderson (2009) summarize that teachers can significantly impact students in almost every conceivable way. The range of improved outcomes includes: emotional, behavioral, and social functioning; cognitive and academic achievement; participation, motivation, and satisfaction with school; verbal and mathematical performance; critical and creative thinking. Perhaps the only individuals more potentially impactful are parents/guardians or primary care givers.

In addition to protective factors existing in the child's environment, Crews et al. discuss "within-child" factors such as intelligence, academic performance, attributional style, and popularity (2007). Regardless of exposure to risk factors, for example, children with higher intelligence tend to be more resilient than their counterparts of average or below IQ; this is particularly true with verbal IQ (van Bokhoven et al., 2005). Intelligence is associated with an improved ability to learn and apply coping skills, development of adequate social-emotional competencies, and the ability to use verbal skills to articulate needs or negotiate interpersonal situations with greater finesse (van Bokhoven et al., 2005). Therefore, it could be reasoned that brighter, more verbal children are more likely to attract a positive adult role model.

Adequate academic performance is likewise protective (Crews et al., 2007). These authors describe the role that "attributional style"—or the way an individual interprets and attributes the causality of events—can function either as a risk or protective factor. Although the effect size is modest (median $r$ of .37), youths demonstrating healthy attribution styles tend to
understand events in a logical, orderly way. Therefore, in negative situations, such as seeing one’s parents go through a divorce, such children are less likely to feel responsible for the event (Crews et al., 2007). Finally, children rated by their peers as popular enjoy a small amount of protection as well (median $r$ of .40) (Crews et al., 2007).

Research on Youth with EBD

Inherent Heterogeneity

In addition to being heterogeneous as a function of the constellation of genetic, biological, and environmental risk and protective factors at work, children with EBD are diverse in their patterns of social, emotional, and behavioral functioning (Kern et al. 2009). EBD may be appropriately conceptualized as the manifestation of a multitude of interrelated symptoms from which numerous subgroups could be distinctly identified; yet this disorder is commonly only divided up into two categories--internal and external disorders (Margalit, 1989). In a single study, for example, Margalit (1989) found statistically significant differences across EBD students' rankings on measures of the following constructs: "Hostility vs. Consideration," "Extroversion vs. Introversion," and "Independence vs. Dependence" (p. 41) which may have important implications for programmatic planning (p. 41). Furthermore, these students vary widely in levels of hyperactivity (Margalit, 1989). A study by Wiley et al. (2008) demonstrates that the academic achievement of students identified with EBD varies significantly across schools of different average socioeconomic level. An astounding 20 point average standard score disparity (one and one-third standard deviations) was found between reading and math test scores between the students of the highest and lowest socioeconomic statuses (Wiley et al., 2008). Therefore, the more one might study this population in an attempt to gain a clearer picture of how to help it, the more ambiguous the disability would seem to appear. Unfortunately, the
heterogeneity which characterizes this group is cited by several authors as one of the most difficult obstacles to overcome in order to improve services and outcomes for this population (Cullinan & Sabornie, 2004; Wiley et al., 2010). At the same time, however, one should rightly expect the present circumstance to exist as it does in light of IDEIA's definition of this disorder. Cullinan & Sabornie (2004) argue that the federal definition "explicitly encompasses diverse behavior, emotion, and cognition problems . . . [and that] [t]his definition has been criticized as being, among other things, ambiguous and unscientific" (p. 157). Until changes are made in the identification process for EBD, this issue is not likely to be resolved.

Externalizing Symptoms

Students with externalizing forms of EBD, on average, are more quickly noticed and more often identified for services than those with internalizing forms (Christiansen, Jenson, Olympia, & Clark, 2005). Although the line distinguishing these two forms of the disorder is blurred, typical symptoms of the former will be discussed individually. Externalizing forms of EBD may include any combination of the following diagnoses: Oppositional Defiant Disorder (ODD), Conduct Disorder (CD), ADHD (hyperactivity subtype), and various personality disorders. Regardless of other diagnoses, externalizing forms of EBD are characterized by high levels of disruptive and anti-social behaviors (Wiley et al., 2010) and are most commonly found in males (HSRA, 2006a; Kann & Hanna, 2000). Typically, affected children have difficulty managing their anger, leading to volatile outbursts of disruptive or even violent behavior (Bradley, Doolittle, & Bartolotta, 2008; Ho, Carter, & Stephenson, 2010; McDuffie, Landrum, & Gelman, 2008). Greenberg et al. explains that many externalizers tend to have the cognitive distortion known as "hostile attribution bias" (2001, p. 19). This leads individuals to see negative events as the result of intentionally hostile acts toward them. This bias also includes blaming
others for their own behaviors or the consequences thereof (Abrams, 2005). Also troubling is the finding that aggressive tendencies quickly become ingrained into behavioral repertoires, making them extremely difficult to extinguish as they move from childhood to adolescence and beyond (Ho et al., 2010). Cullinan & Sabornie (2004) report that, in addition to increased anger and aggressiveness, students with externalizing forms of EBD were rated by teachers as highly defiant and destructive. This was found to be true for males as well as females. Simpson, Peterson, & Smith (2011) add the descriptors "challenging, demanding, unpredictable, and difficult to manage" (p. 230). Deitz & Ormsby relate that they make, on average, nearly three times as many aggressive verbalizations as peers (1992). These behaviors are sometimes referred to as "barrier behaviors" because, as McCurdy & McIntyre (2004) explain, "they effectively bar the child from meaningful integration with others, including family members, school professionals, and prosocial peers" (p. 138). In some individuals, repeated rule-breaking "appears uncurbed by the experience of guilt or the fear of punishment" (Petitclerc et al., 2009, p. 1477).

In addition to their various anti-social "barrier behaviors," children displaying externalizing behaviors engage in more inappropriate verbalizations than typical counterparts adding to their disruptiveness in the classroom (Deitz, 1992). Deitz (1992) found that these students "engaged in twice as many negative noises per hour" as their peers without disabilities (p. 513). Male elementary school students with externalizing disorders monopolize more of their teachers' time than typical classmates; they make nearly three times the attempts to get the teachers' attention and interact with them in excess of four times as much (Deitz, 1992). Individuals with externalizing disorders make limited academic progress which can be partially attributed to their characteristically poor focusing and interaction skills (Kamps & Wendland, 2006). Finally, a somewhat less intuitive characteristic of youths with externalizing EBD is their
statistically increased chance of injury or death. Extensive research by numerous authors suggests that these children have a greater chance of unintentional injury (in some cases leading to death) as a result of willful defiance of rules and authority, impulsiveness, acting out of anger as opposed to rational thought, and risk-taking or sensation-seeking behaviors (Bradley et al. 2008; Schwebel, Tavares, Lucas, Bowling, & Hodgens, 2007; Sutherland, Lewis-Palmer, Stichter, & Morgan, 2008). Unintentional injuries for this population (up to age 18) are the leading cause of death, surpassing the next 20+ causes combined (National Center for Injury Prevention Control, 2002). This constitutes yet one more compelling reason to investigate and implement effective interventions.

Internalizing Symptoms

Similar to those with externalizing forms of EBD, children with internalizing symptoms have considerable difficulty regulating their emotions and moods. In addition to meeting any of the other criteria from the IDEIA federal definition, these youths display pervasively unhappy or exhibit depressed affect—indeed many struggle with suicidal tendencies (Cullinan & Saborne, 2004). Trosper, Buzzella, Bennett, & Ehrenreich (2009) describe permanent states of unhappiness as "unipolar mood disorders" (p. 234). In addition to depression and suicidal tendencies, these students may have a combination of other stressful emotions constantly bombarding their psyche. Cancio & Johnson (2007) describe this group as frequently feeling "angry, frustrated, sad, and fearful" (p. 522). Other authors add anxiety to the list for this form of psychopathology (Trosper et al., 2009, p. 234). Combined with stressors in their environment, this constellation of damaging emotions creates a state of chronic stress for a population already likely to have poor coping skills, a negative attribution bias, and weak resiliency. Children with inherent deficits in emotion regulation will also feel the effects of negative emotions for longer
than typical peers; one small mishap in the morning could be enough to trigger an entire day of anger or depression in such an individual. In this way, children with internalizing behaviors may obsess over a relatively trivial event or detail.

Social-Emotional Functioning

Just as both forms of EBD are characterized by difficulty in regulating emotions, social deficits are also widespread in virtually all affected children. Difficulty in establishing relationships with peers and adults is inherent in the federal definition for the disorder in IDEIA which contains two the following criteria "(a) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers and (b) inappropriate types of behavior or feelings under normal circumstances (Section 300.7(b)(9)). Problems in this domain contribute largely to the overwhelmingly pejorative outcomes of this group of children (Lane, Wehby, Little, & Cooley, 2005). In fact, outcome studies reveal that individuals from this group fare worse than any other disability group; this is true for both elementary and secondary children and for both males and females (Bradley et al., 2008). In their meta-analysis, Quinn, Kavale, & Mathur et al. (1999) list several specific skills on which students with EBD perform poorly, including:

- problems in interacting appropriately with peers or significant adults in their social environment, difficulties in communicating their physical or emotional needs appropriately, inadequate knowledge of social rules or manners, inability to correctly appraise social situations, and even disruptive behavior such as violence or aggression (p. 54).

Sadly, the rejection that children with EBD face begins almost immediately upon entering school. Children with EBD are "notorious for their inability to get along with both peers
and teachers” (McDuffie et al., 2008, p. 12). These children have difficulty establishing and maintaining healthy peer relationships (Greenberg, Domitrovich & Bumbarger, 2001). This results from a combination of their social deficits, poor emotion regulation, and behaviors which set them apart from other children. Abrams (2005) summarizes a typical constellation of symptoms sure to deprive children of meaningful friendships. He describes these youths as having short tempers, weak impulse and self-control, limited self-awareness of their behaviors, and tendencies to blame others for their own actions and to exhibit poor social skills (p. 40). Those with externalizing forms of the disorder are perceived by others as "disruptive, insolent, disobedient, and engaging in behaviors that interfere with the educational progress and impede learning (Fitzpatrick & Knowlton, 2009, p. 253). These same students also tend to have difficulty showing empathy toward others in need (de Wied, Goudena, & Matthys, 2005). The only disability category that rated lower in social skills was autism (Bradley et al., 2004). Perhaps worst of all, the social deficits of this population were found to become increasingly resistant to interventions as they progressed from childhood to adolescence and beyond (Lane, Wehby, Little, & Cooley, 2005).

The inability to maintain satisfactory interpersonal relationships predicts long-term devastation for affected individuals in terms of their ability to settle into healthy adult living (Gresham, 2000). Over time, many of these individuals withdraw from typical peers and move toward deviant peer groups. Such groups only serve to reinforce dysfunctional and anti-social behavioral patterns (e.g., delinquency, criminality) and provide additional opportunities to rehearse them (Greenberg et al., 2001). As mentioned earlier, the consequences of such social deficits are devastating and far-reaching in the lives of those youths affected; their behavior is likely to interfere with every aspect of their lives as adults including work, recreation, home, and
community contexts (Deitz, 1992). In many ways, the post-adolescent social relationships of individuals with EBD are logical extensions of their childhood circumstances. Consider that these individuals have typically experienced "chaotic and unstable" lives since early childhood in which "many of their psychological needs are unmet” (Abrams, 2005, p. 40). Many have suffered significant abuse and neglect while others are disadvantaged by genetic conditions, poverty, and/or by the prenatal substance abuse of their mothers. Therefore, it is perhaps not surprising that these children are "often filled with anger, rage, fear, sadness, and grief" (Abrams, 2005, p. 40). Considered from this perspective, the problematic nature of their social relationships seems to be congruent with all the other aspects of their lives.

Academic Outcomes, Achievement, and Skills

As with their social skills, the EBD population is known for its poor academic outcomes and widespread skill deficiencies (Lewis, Jones, Horner, & Sugai, 2010). As with their social outcomes, these students are known as having the worst academic outcomes of any disability group, including those with learning disabilities (Bradley et al., 2008). This finding is true for both elementary and secondary students as well as both males and females (Bradley, 2008). The research literature is replete with references supporting this conclusion; in fact, these are among the most well-known characteristics of this otherwise confounding disorder. Consider that Bullis and Cheney (1999), Frank, Sitlington, and Carson (1995), Greenbaum et al. (1996), Hayling et al. (2008), Hurley, Trout, Griffith (2010), Kauffman (2005), Kern et al. (2009) Kortering and Blackorby (1992), Koyangi and Gaines (1993), Landrum, Katsiyannis, and Archwamety (2004), Lane, Barton-Arwood, Nelson, Benner, Lane et al. (2004), Locke and Fuchs (1995), Maag and Katsiyannis (2006), the National Longitudinal Transition Study–2 (2003), Sacks and Kern (2008), Sitlington and Neubert (2004), Trout et al. (2006), Wagner (1995), Wagner and Cameto
(2004), Walker, Ramsey, and Gresham (2004), the U.S. Department of Education (2003), Wehby et al. (2003), and Wiley et al. (2008) represent only a small sampling of those authors who have reached the consensus that students with EBD perform worse than any other disability group in terms of: failing courses, failing minimum competency exams, failure to graduate, grade point average earned, suspension/expulsion rates, and dropping out.

In 2002, The U.S. Department of Education cited the drop-out rate of all students with disabilities aged 14 and older as 29.4%; for students with EBD, the rate was 51.4%. A few years later, Cheney et al. (2008) reported the statistic as ranging from 51%-55%. This is twice the drop-out rate for general education students (Quinn & McDougal, 1998). This bodes particularly ill for students in Nevada given that the overall drop-out rate for all students (general education and special education combined) is already 50% (Washoe County School District [WCSD], 2010b). This suggests that the average student in Nevada has roughly the same risk of dropping out as that of a student with EBD for the nation as a whole. Furthermore, it is apparent from this sampling of research, with works ranging over nearly 20 years, that these traits are neither new nor improving over time. For example, even as graduation rates have steadily improved for students with disabilities as a whole, those with EBD have shown no improvement during the same period (Cullinan & Sabornie, 2004).

The relationship between students' emotional/behavioral problems and their academic deficits is complex and appears to be bidirectional. That is, while their school performance is interfered with by their emotions and behavior problems, there is reason to believe that these same problems are exacerbated by frustration rooted in their learning difficulties (Fitzpatrick, 2009). For example, Abrams argues that the "limited academic skills, poor attention span, and low levels of motivation in the classroom" not only interfere with learning, but make school-
based learning a punishing experience for these students, thereby leading to even wider skill gaps (2005, p. 40). Fitzpatrick and Knowlton (2009) and McDuffie et al. (2008) add impulsivity, detachment, and various off-task behaviors to the list of variables interfering with school learning. Finally, Mooney, Ryan, Uhing et al. (2005) describe these students as having difficulties "relating new information to what is already known, and establishing productive work environments . . . [and] act[ing] purposefully and strategically for their academic benefit in the school setting" (p. 204). All of these findings bode poorly for these individuals in typical classroom settings when, as Lane, Wehby, & Cooley (2006) explain, "teachers expect students to meet their expectations, attend to and follow directions, make their assistance needs known to adults in an appropriate fashion, ignore peer distractions when working, and manage conflicts with peers" (p. 153). In fact, de Lught (2007) reported that teachers serving on a focus group discussing students with EBD found it difficult to distinguish where academic and learning problems end and where behavioral ones begin; these skill sets overlap and interact in meaningful ways.

Whatever the causality—which varies by individual—children with EBD have been found deficient in numerous academic skills and areas of academic competency and this has been reported in the research literature for decades (Spencer, Simpson, & Oatis, 2009). In a study described by Benner, Allor, and Mooney (2008) and Nelson, Benner, Lane et al. (2004) of 155 students with EBD ranging from grades K-12, an effect size discrepancy between this group and non-disabled peers of 0.94 was found across every major performance index on the Woodcock-Johnson III achievement battery. The fact that deficits were found in students as early as Kindergarten illustrates how early academic problems manifest in this group. Without intensive
intervention, the academic problems of these children tend to grow increasingly stable and resistant to intervention (de Lught, 2007; Lane, Wehby, & Cooley, 2006).

Findings pertaining to the academic deficiencies of students with EBD are also nothing new. Although different authors report the prevalence of academic deficits for this group differently, all agree that it is high. For example, while Nelson et al. (2004) found that these rates vary as widely as 25% to 97%, de Lught (2007) reported a range of 33%-81%. Trout, Nordness, Pierce et al. (2003) conducted a post-facto review of academic records for 35 students labeled with EBD over a 40 year period. In 31 of these 35 reports (91%), students were found to lag approximately one to two years behind their expected grade level abilities. In many of these cases, academic deficits were found to have an early onset (Nelson et al., 2004; Trout et al., 2003). Furthermore, of the four non-deficient reports, none indicated above age or grade level ability. From a review of literature ranging from 1986-2006, Reid, Gonzalez, Nordness et al. (2004) conducted a meta-analysis of 25 studies comparing the academic abilities of typically developing students with those diagnosed with EBD. These authors concluded that the latter fall at the 25th percentile rank (indicating a mean effect size of 0.69). In terms of grade level ability, children with EBD most typically lag behind by one to three years (Vannest, Temple-Harvey, & Mason, 2009). Specifically, these students were found to have deficiencies in "math, reading, reading comprehension, vocabulary, and written language" (p. 44). de Lught reported significant gaps in "word attack skills, reading fluency and accuracy, and overall reading rate" as well (2007). Nelson et al. (2004) add "listening comprehension, spelling, social studies, and science" to the list and conclude that, in addition to these, "there is some evidence to suggest that they appear to evince academic achievement deficits in all content areas (p. 60). Hayling et al. (2008) report that 75% of this population fell below their expected reading level and that 97% were
below in mathematics. The largest deficits of all appear to be in mathematics and spelling (de Lught, 2007). With regard to literacy and mathematics deficits, in the absence of early and intensive educational supports, performance gaps between these students and their at-grade level peers were found to widen over the years (Nelson et al., 2004; Trout et al., 2006). Undoubtedly, part of their tendency to fall further behind peers across time can be explained by the nature of learning tasks in later grades. That is, beyond the early elementary years, the purpose of reading shifts from “reading-to-read” to “reading-to-learn.” Although many students with EBD tend to improve in terms of reading fluency, the same is not true for their reading comprehension (Lane et al., 2008). Therefore, as students with EBD fail to keep up with expected levels of reading comprehension, they glean less substance from reading assignments and from school in general.

One recent literature review revealed that 25% of this disability group demonstrated academic achievement gaps greater than two years (Kern, Hilt-Panahon, & Sokol, 2009). The academic profiles for students with EBD appear to be similar for both males and females (Nelson et al., 2004; Lane et al., 2008). With such a variety of learning issues, it is little wonder that the profiles of students with EBD have academic profiles mirroring those of students with learning disabilities (LD) (Wehby, Lane, & Fallk, 2003). Yet, in many ways the academic outcomes of this population is even worse than that of the LD population (as well as other disability groups). Wehby et al. explain that in addition to being less likely to graduate high school, students with EBD are less likely to seek and complete postsecondary education than those with LD (2003). They are, on average, educated in the most restrictive education placements of any other disability category (Hayling et al., 2008). Perhaps most alarming is the finding that, unlike children with LD, the deficits of these students do not appear to improve over time (Lane, 2008; Nelson et al., 2004; Wehby et al. 2003); this is despite their receiving more intensive services
than those with LD (Landrum et al., 2004). A study by Greenbaum et al. illustrates this finding well. They found that the percentage of students with EBD below grade level in reading at ages 8-11, 12-14, and 15-18 were 54%, 83%, and 85%, respectively (1996). In math, the respective proportions were 93%, 97%, and 94% (Greenbaum et al., 1996). Another study comparing students with EBD and LD found that at the end of a five year time period, the achievement scores of students with LD "demonstrated statistically significant improvement" while those with EBD demonstrated no growth in terms of ranked ability among peers (Nelson et al., 2004). These findings suggest two important conclusions: a) that the EBD population may be even more adversely impacted by their limitations, in terms of academic performance, than students with LD, and b) students with EBD tend to be highly resistant to intervention attempts (Lane et al., 2005).

Resistance to Interventions

The comorbidity of EBD and learning problems appears to lead to symptoms and deficiencies which are extremely difficult to ameliorate (Lane et al., 2008). Put simply, following a thorough investigation of relevant studies, Lane et al. conclude that "students with comorbid EBD and academic deficits do not improve over time" (2008, p. 45). Several authors have commented on how resistant these students are to various academic and social-behavioral interventions. Lane et al. (2008) explain that their "performance in academic, social, and behavioral domains" tends to "remain stable . . . or even worsen" (p. 59). Kern et al. (2009) state that in addition to having "the poorest educational, behavioral, and social outcomes of any disability group," students with EBD demonstrate "no apparent improvement across time" (p. 18). Sadly, this is true despite of recent emphases and pressures on schools to improve students' academic performance, especially from the NCLB legislation which has been in effect now since
2001. Bradley et al. (2008) report that "studies such as the Special Education Elementary Longitudinal Study (SEELS), the National Longitudinal Transition Study-2 (NLTS2), and the National Adolescent and Child Treatment Study (NACTS), tracking students functioning in academic and social-behavioral domains, "show that only small gains have been achieved for these students" (p. 4). Other studies show that these changes, albeit in a positive direction, have been so small as to fail to demonstrate statistically significant differences in various paired samples t-tests (Hayling et al., 2008). Worse still, some research suggests that in addition to making no significant gains in achievement over a one year period, some students with EBD placed in self-contained special education classrooms exhibited regression in some areas of academic skills by the end of the year while their behavior problems worsened (Kern et al., 2009).

Comorbid Diagnoses/Cognitive Issues

The pervasive failure by students with EBD to show progress is undoubtedly due to a "convergence of many variables" including any of a number of environmental or biological risk factors (Kern et al., 2009, p. 18). This is a state of affairs that has echoed through research literature for nearly half a century now. Research from the mid-1960s shows students with EBD performing significantly below their peers just as they are now (Hayling et al., 2008). Epstein, Cullinan, Quinn, and Cumblad (1994) say about these youth, "few achieve much academic progress over the years and fewer than 10% progress sufficiently [behaviorally] to return to the regular education permanently" (p. 51; Knitzer, 1991). Presumably, one would expect that given customized, self-contained classroom settings providing high levels of support in both academics and behavior, promising improvements would result. However, as Lane et al. (2008) explain, current data suggest otherwise. They report that "across all placements (i.e., general education,
resource, self-contained and special school placement), students with EBD continued to exhibit significant academic delays" (p. 46).

In addition to widespread and stubborn deficits in behavioral, social, emotional, and academic domains, students with EBD are at elevated risk of comorbidity for various other diagnoses, issues, or symptoms such as processing deficits, learned helplessness and language deficits. This finding tends to come as no surprise considering that EBD is often the result of a number of intersecting risk factors and circumstances which can be highly damaging (e.g., poverty, homelessness, abuse, fetal drug effect, etc.). Many of these symptoms serve to further exacerbate the conditions of these youth. To begin with, students with EBD tend to have average or below average IQ (de Lught, 2007; Hendrickson, Smith, & Frank, 1998). Lower IQ, particularly verbal IQ has been associated with especially poor outcomes (van Bokhoven et al., 2005). Secondly, EBD is highly associated with profound deficits in processing speed; nearly two-thirds of these children performed at 2nd percentile rank or below in this area (Benner, Allor, & Mooney, 2008). This implies that children with EBD are often unable to adequately process important information—including their own feelings or the potential feelings of others—before reacting in social situations. In effect, slow processing speed means poor self-regulation, the lack of which may lead to a host of inappropriate behaviors (Hill & Coufal, 2005). Additionally, research supports the importance of processing speed in terms of "proficient reading and many cognitive skills including verbal ability and reasoning" (Benner et al., 2008, p. 324). These authors further explain, "[a]dequate processing speed enables learners to perform basic tasks such as word reading or math computation without conscious effort, thereby allowing the learner to focus more attention on the more complex tasks of comprehending text or solving
math problems" (p. 308). Therefore, slow processing speed is deleterious for both behavioral and academic competencies.

Learned helplessness is another trait commonly associated with EBD. Sutherland & Singh (2004) define this emotional state as existing:

when individuals believe that their own behavior has no influence on consequent events . . . learned helplessness produces three deficits: (a) an undermining of one’s motivation to respond; (b) a retardation of one’s ability to learn that responding works; and (c) an emotional disturbance, usually depression or anxiety (p. 171).

Learned helplessness has been cited as contributing to many of students' academic and behavioral problems (Sutherland & Singh, 2004). Repeated academic failures and insufficient positive reinforcement shape individuals to have reduced confidence, the mindset that they are unable to control events in their lives, and ultimately "leads them to doubt that they can do anything to help overcome their difficulties" (Sutherland & Singh, 2004, p. 172). A lack of positive reinforcement during the school hours leads, in many cases, to school taking on "adverse qualities" (p. 169).

Students with EBD struggle in a number of areas of language functioning (Benner et al., 2008). Benner et al. (2008) report that in a study of a cross-section of public school students with EBD, deficits in "total language, receptive language, and expressive language, were 85%, 77%, and 89%, respectively" (p. 307). These findings corroborate the findings from previous literature reviews which revealed that "as many as 9 out of 10 children with EBD served in public school settings may have language deficits" (Benner et al., 2008, p. 308). Longitudinal studies suggest that language disorders appear to predispose individuals for later onset of EBD. Children aged 3-5 with communication disorders but no symptoms of EBD were at disproportionately high risk of
developing EBD at re-evaluation at ages 8-12 (Hill & Coufal, 2005). The experience of a) not fully understanding what others are communicating, and b) having trouble communicating oneself to others can be highly frustrating. Undoubtedly, years of this can predispose children to begin expressing desires, feelings, or messages through more aggressive means.

In addition to these, several authors cite other comorbid conditions, diagnoses, or cognitive problems associated with EBD. Cooper (2011a) lists "anxieties, phobias, and depression, self-harm and suicide, conduct disorders (CD), hyperkinetic disorders/attention deficit hyperactivity disorder (ADHD), autistic spectrum disorders (ASD), psychotic disorders, eating disorders, and substance and drug abuse" (p. 71). Greenberg et al. adds dysthymia, poor social skills, ODD, and cognitive distortions such as the hostile attribution bias to the list of comorbid conditions (2001). Finally, Epstein Cullinan, Quinn, and Cumblad (1994) list learning disabilities and Bradley et al. (2008) describe problems with adaptive behavioral skills associated with the EBD population.

Student Educational Placement Data

As mentioned previously, students with EBD have the most restrictive educational placement of any category of disability. Often these students are excluded from typical classrooms due to their behavioral problems (de Lught, 2007). This remains true in spite of the trend of increasing the amount of time that students with disabilities spend in general education settings (Landrum et al., 2004). Although this trend was seen in the EBD population as well, the change was minimal. Between 1988 and 1998, the rates of placement in restrictive settings (including self-contained classrooms, special schools, or residential placements) dropped from only 56% to 51% (Landrum et al., 2004). Overall, students with other disabilities are reported as spending, on average, 50% of the school day in the general education environment whereas
students with EBD lag behind at 27% (Landrum et al., 2004). Only one-third of these students spend 60% or more of their time in the general education environment (Kern et al., 2009; Niesyn, 2009). Nearly one-in-five (18%) students with EBD receive their education in some form of separate facility, including home-bound schooling, psychiatric hospitals, and juvenile detention centers (Lane et al., 2005; Robertson, Bates, Wood, & Rosenblatt, 1998). Furthermore, once placed in any kind of restrictive setting, fewer than 10% of students ever return to the general education environment full-time (Epstein, Cullinan, Quinn, & Cumblad, 1994).

Involvement with Punitive Interventions

In terms of involvement with school disciplinary actions and juvenile justice, students with EBD have the worst outcomes of any disability group (Maag & Katsiyannis, 2006; Wiley et al., 2008). Compared with 13.1% of all students with disabilities nation-wide, more than one-third (34.8%) of those with EBD will be arrested before leaving school (Bradley et al., 2004; Maag & Katsiyannis, 2006). A more recent figure by Bradley et al. in 2008 places the arrest rate for high school students with EBD at 44%. Whatever the precise amount, the arrest rate for pupils with EBD climbs considerably as they mature and is considerably higher for males (van Bokhoven et al., 2005). The rate for disciplinary involvement is much higher for adolescents than for children (NLTS2, 2003). Within three years of leaving high school, Merrell & Walker (2004) report that about 50% of students had been arrested at least once. A follow-up at the end of five years found that this number had increased to 58% of former students with EBD. For those who had dropped out of high school, this figure is cited as 73% (Landrum et al., 2004; Lewis et al., 2010; Sawka, McCurdy, & Manella, 2002). These figures are disturbing in light of the finding by law enforcement experts that the ratio between serious criminal offenses to actual arrests is 10:1 (Merrell & Walker, 2004). Finally, and perhaps most alarming to this Nevadan
author, Doren, Bullis, & Benz (1996) found that students in Nevada with EBD were 13.3 times more likely to be arrested than peers with other disabilities (Landrum et al., 2004).

Running parallel to rates of arrest are the high incidence of school suspensions and expulsions encountered by students with EBD. As with their police involvement, this group is the most disproportionately represented in disciplinary exclusions (Maag, 2006). The NLTS2 study reported the suspension rate for adolescents at 44% (Bradley et al., 2008). For those students who are specifically designated as receiving special education services under the federal eligibility category of ED, this figure was reported as 72.5% (Bradley et al., 2004). This is considerably greater than the next two highest disability categories combined; Other Health Impairment (OHI) and Learning Disability (LD) were reported as 21% and 17%, respectively (NLTS2, 2003). Interestingly, the relatively high arrest rates for the OHI and LD population is in part due to the fact than many students with EBD are classified by multidisciplinary teams under these eligibility categories when ED would also be appropriate (since only one disability category is selected). Not only do suspension/expulsion rates increase dramatically as students get older, these rates have soared since the mid-1980s. At that time, only 13% of students with EBD received these types of disciplinary action. This works out to the suspension/expulsion rate increasing approximately 500% in about a quarter century (averaging about a 100% non-cumulative increase every five years) (Bradley et al., 2008). Clearly, where students with EBD are concerned, the educational field is in the midst of a crisis.

Long-term Outcomes for Students

In addition to the worst educational, social, and disciplinary outcomes during their school years, students with EBD have the poorest post-secondary outcomes of any student disability group (Fitzpatrick & Knowlton, 2009; Hayling et al., 2008; Hurley et al. 2010; Lane et al., 2006;
Lewis et al., 2010; Kern et al., 2009). This disorder is "predictive of severe long-term difficulties across virtually every aspect of life" (Fitzpatrick & Knowlton, 2009, p. 253). Conroy and Brown (2004) elaborate, "too often children’s problem behaviors have continued into adulthood, leading to long term, chronic disabling conditions" (p. 225). Worst still, this group has shown "little improvement since the early 1980s when the first longitudinal studies that included this population began (Bradley, 2008). The NLTS2 study investigated the outcomes of students of various disability groups 10 years after leaving high school. Overall, the results were promising as the majority of students showed improvement in most areas (2003). However, those classified with EBD demonstrated little to no improvement (NLTS2, 2003). At best, their post-secondary outcomes are described as "disappointing" (Carter & Wehby, 2003, p. 449); at the worst, "bleak" (Lewis et al., 2010, p. 82) These individuals seem to have considerable difficulty adjusting to adult roles, expectations, and lives (Bradley, 2008; Landrum et al., 2004). After leaving high school, students with EBD are less likely than other groups to pursue adult education (Zigmond, 2006). Only about 20% of students with EBD initiate a post-secondary education after leaving high school (Zigmond, 2006). Of those few who persevered and completed post-secondary training programs, in many cases, this "did not often lead to new employment opportunities or improved earnings outcomes" (Zigmond, 2006, p. 106).

The NLTS2 revealed highly unstable post-secondary employment patterns among this population as well. Two years after leaving school, Landrum et al. found that only 41% of these young adults had jobs (2004). By the end of three years, this ratio had only risen to 50% (Hayling et al., 2008). Across this two year period, the number of hours individuals worked varied considerably and did not exhibit an upward trend (Zigmond, 2006). Of those 50% employed, only 17% were working full-time while 33% worked part-time (Landrum et al.,
2004). Furthermore, most of these jobs lacked health benefits (Hayling et al., 2008). Worse still, the employment rate for those students specifically categorized with ED during school (as opposed to, for example, LD or OHI) was only 30% (NLTS2, 2003). For this group, employment rates at three months and 24 months after leaving school did not differ (NLTS2, 2003). By the end of five years after leaving school, the unemployment rate for former students with EBD ranges from 42%-70% (Carter & Wehby, 2003). The rate ranged from 31%-46% even for "participants of model demonstration transition programs" (Carter & Wehby, 2003, p. 450). Much of the employment problems of former students with EBD in general can be attributed to their "chaotic personal lives" (Lane et al., 2006). Zigmond stated that former students with EBD, as adults, "drifted in and out of work, changing jobs regularly . . . most left jobs as quickly as they found them" (2006, p. 106). Hayling et al. (2008) summarizes, "They frequently quit jobs that were not to their liking and sought other means to obtain purchasing power, which resulted in too little time on the job to advance in the position and improve their standard of living" (p. 123). This helps explain why these students, as adults, occupy mostly entry-level positions of employment not requiring high school diplomas (Hayling et al., 2008). Therefore, as adults, these individuals may be competing with high-school teenagers for the same jobs.

Former students with EBD suffer disproportionately from a number of other disastrous post-secondary outcomes as well. For example, they are at increased risk of contracting HIV/AIDS and for suicidal behaviors (Pollio, McClendon, North, Reid, & Jonson-Reid, 2005). They are more likely to develop abnormal sexual behaviors (Sacks & Kern, 2008) and many of them go on to develop substance abuse habits (Conroy & Brown, 2004; Lane et al., 2008; Lewis et al., 2010; Pollio et al., 2006). Among students with Disruptive Behavior Disorder, van Bokhoven et al. (2006) found that 58% answered affirmatively to an item indicating that they
had been "so drunk that he/she could not walk anymore" (p. 83). From this same sample, 64% admitted to using soft drugs including marijuana. Those with EBD as adults also smoke daily more often than those from comparison groups (van Bokhoven et al. 2006).

These adults, on average, tend to enjoy few social and societal supports. Relationships for adults with EBD tend to be dysfunctional and unsatisfying for both parties (Trout et al., 2006). Not surprisingly, they tend to be shunned by peers leading to more short-lived friendships (Conroy & Brown, 2004). Their poor social outcomes likely correlate to their higher rates of clinical depression (van Bokhoven et al., 2005; Conroy & Brown, 2004). Community adjustment in general is also poor for this population (Wiley et al., 2010). The contrast in obtaining services between their schooling years and those of early adulthood is stark.

Individuals move from a public education system providing education and various services (e.g., from the school counselor, school psychologist, transportation, free/reduced breakfast/lunch to a community environment in which individuals must a) have knowledge of, b) apply for, and c) be found eligible for services which are often rather limited (Hayling et al., 2008). This is especially true in Nevada (Sexton, 2010). Many adults with EBD have little awareness of existing services or prefer not to pursue them due to social stigmas attached to doing so (Hayling et al., 2008).

**Problems and Costs Associated with EBD**

Problems Affecting Educators and Others at School

Students with EBD tend to be highly disruptive to the mission of those schools they attend. Their actions detract from staff members' abilities to effectively perform their duties. Teachers of students with EBD are reported as "the least satisfied with their working conditions" of any other type of teacher (Stempein & Loeb, 2002). In turn, students with EBD "are among those most difficult to teach and the least likable by those who work in educational settings"
(Billingsley et al., 2006; Cancio & Johnson, 2007, p. 512). Although some teachers do find personal satisfaction in their work with this group, the intense stressors placed upon them often lead to burn-out, emotional exhaustion, absenteeism, decreased performance and commitment, a low sense of personal achievement, and declines in their physical and mental well-being, even to the development of psychological disorders (Billingsley & Cross, 1992; Iovannone, Greenbaum, Wang, Kincaid, Dunlap et al., 2009; Platsidou & Agaliotis, 2008; Klassen & Chiu, 2010; Moè, Pazzaglia, & Ronconi, 2010; Watson, Harper, & Ratliff, 2010). Teachers of children with EBD are often required to face behaviors which are "aggressive" (Cancio & Johnson, 2007; p. 512), "destructive," "threatening," "posing immediate danger to students, peers, teachers, or property," or "disruptive" from these students on a daily basis (Kern et al., 2009). In a study of 67 classrooms servicing students with EBD, only in four (6%) classrooms were none of these behaviors observed (Kern et al., 2009). In a study reported by Lewis et al., many teachers of EBD students were "fearful of physical and verbal abuse by their students" (2010, p. 87). Children with EBD require far more resources, including intensive services as well as teachers' time and attention (Cheney, Flower, & Templeton, 2008). Scholars estimate that the most "chronically offending" 1%-5% of the student population can take up more than half of the time teachers spend dealing with discipline problems (Cheney et al., 2008, p. 108). For example, students with EBD are twice as likely to be involved in physical fights at school (Bradley et al., 2008). Yet, despite the increased resources and attention they receive, these youths are so frequently disruptive, aggressive, and unmotivated, that they can undermine even the most determined teacher's efforts to help them (Sutherland, Lewis-Palmer, Stitchter, & Morgan, 2008).
As a result of those working conditions common when serving students with EBD, many teachers of this population first begin their teaching positions optimistically before, as Knitzer (1991) puts it "moving out of this work as quickly as possible" (p. 107). Such educators typically either seek reassignment or leave the educational field altogether (Walker et al., 2004). Dinham and Scott explain that too many of these teachers simply feel "inadequate in the face of the greater challenge" presented by this student population (1998, p. 15). Those who remain are at-risk of becoming "demotivated teachers [who] demotivate students through emotional contagion" (Moè et al., 2010, p. 1145).

As much as teachers may shape their students’ behaviors, research has shown the process to be bidirectional. Study after study has documented the influence that youths with EBD have upon educators (Sutherland & Singh, 2008; Sutherland, Lewis-Palmer, Stichter, & Morgan, 2003). This occurs primarily as a result of negative reinforcement; that is, when the removal of an aversive condition results in an increase in the likelihood of a future behavior (Skinner, 1953). Lewis et al. relates that aggressive and disruptive behaviors from students can shape teachers to "(a) have fewer interactions with them, (b) make less demands on them, and (c) implement fewer behavioral support strategies to alter current behavior problems" (2010, p. 86; Rathel, Drasgow, & Christie, 2008). Teachers learn—even if unconsciously—to avoid students' aversive behavior by not engaging them. As a result, teachers of students with EBD begin to provide less instruction to them (Wehby et al., 2003). Naturally, students' misbehaviors are therefore also negatively reinforced since these behaviors result in decreased instructional demands (Rathel et al., 2008). The "negative reinforcement cycle" that ensues from these exchanges serves to perpetuate problem behaviors by students and less-than-optimal instruction by educators (Rathel et al., 2008, p. 68; Sutherland et al., 2008).
Problems Affecting Parents/Guardians/Caregivers

Rearing a child with EBD can be a difficult, stressful, and at times, an unrewarding experience. As with teachers, parents and caregivers of these youths report several sources of strain. In fact, the only population of children reported to be approximately as stressful to caregivers as children with EBD were those with "severe" medical needs (Rosenzweig, Brennan, & Ogilvie, 2002, p. 416). Parental employment, for example, is one area significantly impacted by these children. Parents make a number of sacrifices and adjustments to their work lives and aspirations in order to accommodate the needs of their children (Rosenzweig et al., 2002). For one, guardians of children with EBD frequently report specifically seeking jobs that will be compatible with child-care demands and schedules (Rosenzweig et al., 2002). Many times this entails looking for jobs that provide fewer work hours per week; other times this means settling for employment that was different from that which the adult is qualified or educated (Rosenzweig et al., 2002). Some parents resign themselves to only working during hours their children are at school or when "qualified substitute caregivers [are] available" (Rosenzweig et al., 2002, p. 419). Work interruptions are a frequent occurrence when caring for a child with EBD. Rosenzweig et al. state that parents are often required to take unscheduled absences from work in order to "bring a mental health crisis under control" (2002, p. 418). These caregivers never know when they will get a phone call from school or home saying "Please come right away; we need you now." The unpredictable nature of rearing a child with EBD often results in chronic stress for these guardians.

Rosenzweig et al. (2002) state that caretakers at work often have difficulty concentrating on work responsibilities. This combined with the need for flexibility from employers results in poorer job evaluations in many cases. As one parent shared in a qualitative interview,
"Flexibility only goes so far . . . I have seen on my evaluations over the last several years comments about 'Needs to get her personal life in order. Personal life interferes with work.' . . . While they are understanding, it compromises everything" (Rosenzweig et al., 2002, p. 420).

Some parents report giving up work-related travel duties in order to stay home at all times in order to provide direct care for their child (Rosenzweig et al., 2002). This is a common experience for parents of children with EBD due to the difficulty they face in finding adequate child care. Many child care centers request that parents do not bring these children back stating that they simply are "not ready to include children with mental health challenges" (Rosenzweig et al., 2002, p. 419). As a result, some of those caretakers who can afford it hire and spend time training child care providers who are able to come directly to the home (Rosenzweig et al., 2002). Rosenzweig et al. state that qualified help can "demand high wages and set employment conditions as they wanted" (2002, p. 419); it is simply not an option for many parents. The problem is aptly described by one mother who stated:

for $8.00 per hour you can get students from [a local] university who are willing and able and knowledgeable. The problem is that who can afford to pay $8.00 per hour after-tax money? So if [my pay] is $15 [per hour], and I pay $5.00 in taxes, I have $10.00. I give the student, who is in [his or her] 20s, $8.00 and I am in my 40s and I get $2.00 (Rosenzweig et al., 2002, p. 419).

Besides employment, children with EBD tend to affect many aspects of the lives of their families. Rosenzweig et al. report increases in both physical and mental "stress-related health problems" faced by these adults (2002, p. 421). These parents also report decreased satisfaction in their roles as spouses and parents (Rosenzweig et al., 2002). A parent who adopted two boys with EBD concisely summarized the way many such caregivers feel: "[my work] is a pretty
thankless job" (Rosenzweig et al., 2002, p. 421). Families of youths struggling with EBD tend to frequently suffer from financial problems due to the implications these children have on employment and child care (Rosenzweig et al., 2002). Conflict between family members is common (Platt, 1985; Schene, 1990; Strawbridge, Wallhagen, Shema, & Kaplan, 1997). Standards for home care are frequently relaxed in the face of more pressing demands. These adults find limitations on their discretionary time and income as well as on their personal freedom and privacy (Rosenzweig et al., 2002). Caregivers of children with high needs exhibit, as Rosenzweig et al. put it, "a desperate need for respite care" (2002, p. 419). Finally, siblings of children with EBD find that they enjoy less time and attention from their parents than do their brothers and sisters with more challenges (Rosenzweig et al., 2002).

**Challenges Facing the Field**

The field of special education has been besieged with criticism for decades. Forness (2005) states that since the 1960s, "special education was unduly stigmatized, substantially segregated, and largely ineffective, [that] [s]ome things never change and [t]hat most of these criticisms continue today" (p. 311). Fisher's (2002) claim that "special-ed is the gold-plated garbage can of American schooling" expresses the sentiment well (p. B1). Despite the years of criticism, Cook, Landrum, Tankersley, & Kauffman (2003) defend the profession by countering that "it is misleading to suggest that special education is not effective. Indeed, the volume and availability of research documenting effective practices for students with disabilities has risen dramatically in recent years" (p. 347). This author agrees that although there is certainly room for improvement, special education cannot be easily dismissed as "broken." Rather, research conducted over the past few decades in special education, school psychology, Applied Behavior Analysis, school-based mental health, and related fields has been invaluable in constructing the
knowledge base used by practitioners today. Although some challenges remain, programs based upon evidence-based practices have been overwhelmingly successful in the education and treatment of students with various disabilities, such as those with Intellectual Disability and LD (NLTS2, 2003). The success of such approaches on top of requirements by NCLB will ensure their continued use. Unfortunately, despite area improvements and success the field of special education has experienced, the progress of students with EBD has been profoundly unsatisfactory. As Sexton (2010) summarizes, "Federal data indicate there has been little improvement in outcome for [these students] since the early 1980s" (p. 1). In questioning why this population has fared so poorly for the last 30 years in spite of improving outcomes for other student disability groups, this author has identified several obstacles which may be acting as barriers to the improvement of special education insofar as those with EBD are concerned. These challenges, include: programmatic problems; the research-to-practice gap; problems of teacher affect and attrition; teacher training, experience, and competence; identification and referral issues; fragmentation and overlapping service delivery; shortages of resources/services; and parent/guardian concerns and their impact. Insight into these issues can contribute to: a) policy decisions/changes which will facilitate the development of more effective programs for students with EBD, b) to refinements to programs already in existence (such as the CSSS System in Northern Nevada), and c) a better understanding of factors responsible for the halted progress of this disability group.

Programmatic Problems

Simpson et al. (2011) posit, "Just as surely as there is evidence that EBD is a harmful, insidious, and underserved disability is certitude that effective educational programming is a successful route to EBD prevention and amelioration" (p. 230). Assuming these researchers are
correct then based on the current educational outcomes for students with EBD, establishment of "effective educational programming" must be an elusive goal. The HRSA (2006) reports that "too little attention is given to how schools do and do not address mental health and psychosocial concerns" (p. 17). Hayling et al. (2008) explain that there have been only a few studies investigating educational programming concerns for students with EBD. Moreover, of those conducted, much of the data used has been questionable (e.g., the results of "one shot" standardized assessments, or student records influenced by teacher subjectivity) (p. 27). Therefore, thorough and reliable reports detailing problems with educational programming for students with EBD may be difficult to find. This paucity of research is in itself a challenge to the improvement of services for this disability group.

Despite the lack of well-conducted research investigating special education programs for youth with EBD, pertinent literature offers numerous examples of how current practices fall far from the ideal. One problematic theme identified by several authors involves the issue of "control." That is, in many classrooms serving students with EBD, the goal does not appear to include helping them master academics, to learn social skills in authentic environments, to regulate their emotions, to learn how and when to use coping skills, or to learn school survival skills such as organization or note-taking; rather, "[i]t appears that the goal is more to maintain silence in the classroom" (Knitzer, 1991, p. 105; Steinberg & Knitzer, 1990; Wehby et al., 2003). As Wehby et al. put it, current practices have "an almost exclusive focus on behavior problems, with little attention given to the educational needs of this population" and that the "prevailing approach" of special education teachers consists of "the notion that students' behavior must be controlled before they can be taught" (2003, p. 194). In some cases, this situation is the understandable result of very trying circumstances. Tyler-Wood, Perez Cereijo, and Pemberton
relate a situation in which a special education teacher recounted her futile attempts to teach curriculum: "I can't teach any actual material in our classroom until I can get my students' behavior under control. I have to just throw academic[s] out the window. It is very frustrating" (p. 30). The cumulative result of teacher stress, as Abrams (2005) puts it is:

Teachers’ (sic) doing very little teaching, and students’ (sic) doing very little learning.

Much of the time is spent in off-task behavior, and high levels of tension are often exhibited among staff and students. Students and staff engage in negative behaviors, and the stress and tension in the classroom often escalate (p. 41).

In many cases, the "point-and-level system" is used to achieve control over students (Steinberg & Knitzer, 1990, p. 6). Unfortunately, instead of being used as a tool to manage behavior so that learning can occur, many times such systems end up becoming treated by teachers as though they are ends unto themselves (Steinberg and Knitzer, 1990). Consider the following classroom observation summarized by Steinberg & Knitzer (1990):

During the entire time, the teacher walked around the room, noting off-task behavior that was potentially disruptive, such as talking out of turn. But she paid no attention to whether the children were engaged with or even comprehended the worksheets in front of them. One child was hunched over his desk with his eyes closed; another spent more than half of the time erasing everything he marked; and a third was doodling on the corner of the page. At the end of the period we asked the teacher how she chooses her curriculum. She told us about her point-and-level system (p. 6).

Furthermore, research suggests that children with EBD receive less and less effective instruction than their non-disabled peers (Witt, Gresham, & Noell, 1996). Steinberg and Knitzer (1990) explain that in such classrooms teachers plan to do the vast majority of the talking while
"children are rarely encouraged to ask thinking questions" and what they learn is "devoid of any connection to the children's cognitive or emotional needs" (p. 67). Meaningful instructional experiences occurring outside of the classroom are non-existent for up to 90% of students with EBD (Bradley, 2008). Instead, these programs might be characterized as six hours of "an endless stream of worksheets" in order to keep students busy and the classroom quiet; indeed, this criticism still echoes today, now twenty years after Knitzer's observation (1991, p. 105; Simpson et al., 2011).

Another theme running throughout the criticisms regarding the educational programming for students with EBD is that of the overall negativity of their classrooms. Iovannone et al. (2009) found that despite the attempts by many schools to put into place more positive approaches to behavior management, school personnel often resort back to more punitive techniques. Abrams (2005) explains that especially for this disability group, "[s]chools should be a safe haven for them . . . [yet] . . . [b]ehavioral and social deficits of these students are often met with anger and punishment from teachers" (p. 4142). Far from being a "safe haven," Iovannone et al. characterize typical strategies as being reactive instead of proactive, not based on the function of the behavior (i.e., "nonfunction-based"), and punitive—rather than positive—in nature (2009, p. 213). Such approaches rarely lead to long-term improvements in student behavior and, in some cases, exacerbate them (Iovannone et al., 2009; Kern et al., 2009).

In spite of four decades of research demonstrating the strong positive influence of teacher praise and behavioral incentive plans on student behavior and the observation that positive reinforcement is fast and easy to implement, these techniques are underused by many special education teachers serving students with EBD (Cook et al., 2003; Rathel et al., 2008). Rates of teacher praise have been found to range from "less than one to 4.5 per hour" (Rathel et al., 2008,
p. 68); Cancio and Johnson (2007) reported the average rate to be 2.5 per hour. Put differently, teachers of students with EBD were found to deliver negative to positive statements in a 2:1 to 4:1 ratio (Rathel et al., 2008). In most cases, when students with EBD complied with teacher requests, teachers simply gave another command rather than issuing a praise statement (Cancio & Johnson, 2007). Rathel et al. (2008) speculate that the underuse of positive praise by teachers "may be related to the fact that students often have more influence on teachers' behavior than teachers have on students' behavior" (p. 68); this statement makes sense given "the most consistent interactions between teachers and students with EBD tend to occur around instances of inappropriate classroom behavior by the child" (Wehby et al., 2003, p. 194). Overwhelmingly negative teacher interaction styles continue today in spite of recommendations of ratios ranging from 3:1 to 8:1 favoring the positive (Rathel et al., 2008). When incentive plans do exist, they are often not implemented with fidelity (Kern et al., 2009). Other times, incentive plans are overly simplistic. The same motivators are used for all students with little to no effort made to determine what is motivating for individuals. For example, Steinberg & Knitzer (1990) described a classroom for students with EBD ranging in grade from 2nd to 6th for which getting to sharpen their own pencil was used as a formal reward (whether or not individual students found this incentive motivating).

Observations of teaching practices used with students with EBD reveal that typical instructional practices closely mirror those used in general education classrooms (Kern et al., 2009). Only 2.2% of students with EBD use a specialized curriculum despite their typically intense academic deficits (Bradley et al., 2004). This stands in contrast to the purpose of special education classrooms which, ideally, "should represent highly individualized learning environments where instruction is matched to need" (Hayling et al., 2008, p. 41). Cook et al.
(2003) suggests that "special education" cannot be called "special" if it lacks effective educational techniques that are carried out with consistency and fidelity (p. 347). de Lught (2007) attributes this lack of attention to individual learning needs as contributing to the exacerbation of achievement deficits over time. In formal classroom observations conducted by Kern et al., whole group activities (i.e., lecture) requiring passive student involvement occurred about 42% of the time followed by 35% of the time devoted to independent seatwork (2009). Teaching staff were only observed to spend 5% of their time providing individual assistance to students (Kern et al., 2009). As a fifth—yet somewhat less substantiated—reason, Bradley (2008) argues that the lack of research on effective instructional practices is less to blame than simply a "lack of coordinated and organized will to focus on this specific population" (Bradley, 2008, p. 18). This problem contributes to a research-to-practice gap in the field, which is also a serious challenge.

**Research-to-Practice Gap**

Although the research-to-practice gap is related to problems with academic programming, it is itself an undeniable problem in the field of EBD. Although research-to-practice gaps are fairly common in the educational profession as a whole, Cook et al. suggest this problem is especially significant with regard to EBD (2003, p. 345). In comparing the knowledge base in the field with what is actually occurring in classrooms, Cook et al. (2003) remark, "the conclusion cannot be very positive" (p. 356). Those techniques known to be valuable are infrequently used or, at times, are "utilized in such a way as to render them ineffective or even counter-productive (Cook et al., 2003, p. 350). This is not to suggest that many schools do not endeavor to put evidence-based practices in place for these students (Iovannone et al., 2009). After all, although the research literature on effective instructional practices for students with EBD is less than robust, several model programs do exist (Quinn, 1998). As Lewis et al. (2010)
put it, the field has at least "provided the roadmap of best practice" (p. 84). What appears to happen is that teachers, regardless of their training, tend to resort to techniques which are negative (e.g., punishment and exclusion) or which are not research-based (Iovannone et al., 2009). In effect, the research-to-practice gap is widened by teachers who, for various reasons, fail to establish classroom environments that support the academic, social, emotional, and/or behavioral needs of their students (Lewis et al., 2010; Olive & Reschley, 2010). Therefore, while authors such as Hurley et al. (2010) suggest that "more needs to be done to conduct quality research to assist youth with EBD," (p. 141) the present author supposes that additional research may have no meaningful impact upon the field so long as practitioners are not even applying what knowledge currently exists.

The emphasis on ameliorating the undeniable research-to-practice gap present in the literature is nothing new (Stichter & Conroy, 2004). It has been a "matter of national concern for some time" (Fitzpatrick & Knowlton, 2009, p. 254). In June of 1990, the Peacock Hill Working Group, composed of a dozen leaders in the field of EBD, met in Charlotte, Virginia to develop recommendations for improvements in this area of education (Gage et al., 2010). From these efforts emerged an outline for developing a systematic, scientifically-supported, multicomponent approach to educating youths with EBD (Gage et al., 2010). Yet, two decades later, in many ways current practices seem to resemble those used since the 1980s (Maggin et al., 2010; Walker et al., 2000). Thus, in spite of what would appear to be the field's best effort at systematically addressing this ongoing concern, little meaningful change from the "curriculum of control" has been observed. This is true even in recent years as schools have increasingly adopted the evidence-based, "systems-level, three-tiered proactive intervention approach adapted from the public health/prevention model" known in many school districts as "Response to Intervention"
(RTI) or similar titles (Iovannone et al., 2009). Lamentably, as late as 2011, Simpson et al. state that "this longstanding custom will in all likelihood continue, at least to some extent, into the foreseeable future" (p. 232). Sans implementation of evidence-based programs and strategies conducted with integrity and fidelity, there can be no reasonable expectation for improvement in this population's outcomes.

Problems of Teacher Attrition and Affect

The shortage of teachers in American public schools is a continuing issue of national concern. With the retirement of the baby boom generation, more teachers are exiting the profession than are entering (Houchins, et al., 2010; Liu & Ramsey, 2008). Exacerbating this concern are increasing student enrollments as well as problems with teacher attrition (Liu & Ramsey, 2008). As Liu & Ramsey put it, "[t]eachers move in and out of school systems as if through a "revolving door," continuously creating excessive demand for replacement teachers (2008, p. 1173). Currently, over 500,000 new teachers are being hired annually in an attempt to staunch what Coffey (2010) refers to as the "exodus from the teaching profession" (p. 179). This is particularly a problem in the Western world (Keogh, Garvis, & Pendergast, 2010). In these countries, the attrition rate for novice teachers is 500% that of their more experienced counterparts (Keogh et al., 2010). Of beginning teachers, the attrition rate within four years is 25%-50% (HRSA, 2006). Among all teachers, about one-third report intention to leave within five years (which averages to 6.6% annually) (Billingsley & Cross, 1992). This rate corresponds almost identically to their actual rate of attrition; that is, in the coming 7-10 years, 50% of all teachers will be leaving the profession for all reasons (a rate which averages 5%-7.1% annually) (Couvillon et al., 2009; Kim & Loadman, 1994). Therefore, this amounts to no less than 250,000 teachers in a five year period (Gardner, 2010). As Tom Carroll, President of the National
Commission on Teaching and America's Future puts it, "[w]e don’t have a teacher shortage . . . but we have a horrendous turnover and attrition problem (Vail, 2005, p. 16).

Costs associated with replacing America’s leaving teachers in terms of recruiting, interviewing, hiring, administrative processing, professional development, and training total in excess of $7 billion annually (Perrachione, Peterson, & Rosser, 2008). This figure excludes the financial investment in these individuals’ teacher training from publically-funded universities. More specifically, attrition rates for special education teachers are much higher; Couvillon et al., 2010 report this group of educators "leaves at twice the rate" of their general education counterparts (p. 218). For example, in Wisconsin, the attrition rate during a given year for general education teachers was 5.8% while 13.7% of its special education teachers left (Billingsley & Cross, 2002). In urban and low SES areas, the attrition rate for special education teachers is as high as 30% annually (Ader & Bullock, 2010; Cooley & Yovanoff, 1996). These schools have especially high rates of absenteeism and usage of substitute teachers (Sawka et al., 2002). Most troubling of all, those teachers who are most likely to leave the field and the least likely to return are those who are the most academically well-prepared (Billingsley & Cross, 2002); as measured by college entrance exams, the teachers leaving the field were found to be the "best and brightest" candidates (Keogh, Garvis, & Pendergast, 2010, p. 17).

The especially high attrition rates in special education are not new; this problem has been recognized for a quarter century (Cancio & Johnson, 2007). It is estimated that "98% of all school districts experience shortages in the field of special education" (Houchins et al., 2010, p. 624). The especially high attrition rates in the field of special education are attributed chiefly to the feelings of stress, burnout, and poor job satisfaction which too frequently afflict these professionals (Viel-Ruma, Houchins, Jolivette, & Benson, 2010). Special education teachers
were found to have statistically significant differences (i.e., lower) \( (p \leq .01) \) in job satisfaction as compared to their general education peers. More specifically, it was found that among all types of special education teachers, those who work with students with EBD have the highest attrition rate of all (Adera, 2010; Singh & Billingsley, 1996). An astounding 36\% of teachers of students with EBD plan to leave their positions within one year (Stempien & Loeb, 2002). Another 10.4\% of these teachers were unsure about whether they intended to leave or stay (Singh & Billingsley, 1996). This is particularly alarming given how reliably teachers’ intentions to leave predict actual attrition rates. Furthermore, a survey of 402 teachers of students from this disability group found that nearly half had recently considered attempting to switch into general education positions (Stempien & Loeb, 2002). In analyses of teacher shortages over a 10 year period, teachers of students with EBD have consistently represented the most severe shortage (Billingsley et al., 2006; Landrum et al., 2004). In 2006, Gagnon reports that the nation is short 6,000 teachers for students with EBD. The severe problem in retaining qualified teachers of students with EBD is understandably a challenge for the field. Aside from the precious resources which must be devoted to replacing and retraining teachers instead of going into classrooms, excessive teacher turnover "has been ascribed as the root cause of many educational problems" (Liu & Ramsey, 2008, p. 1180).

The constant turnover of staff is debilitating to the mission of schools in a number of ways. First, as teachers leave, they take their wealth of experience with them. This requires new teachers to spend considerable time and energy merely to become acclimated to their new positions and learn their new roles. Secondly, it disrupts the professional community environment of the school. Collaborative patterns among colleagues can contribute considerably to a school's effectiveness but this takes time to develop and mature. Thirdly, students with EBD
tend to have chaotic and unstable personal lives and relationships. Schools offer the potential of providing students with stable and positive adult role models. However, when these students instead experience a "revolving door" of teachers, this opportunity is taken from them; instead, a rapidly changing school staff only adds additional transition and unpredictability to their lives. Fourthly, just as teacher transiency damages the ability for professionals to establish effective collegial relationships, it disrupts the process of collaborating with the students’ families. This is unfortunate given the role that family involvement has in achieving positive outcomes for children (Knitzer, 1991).

Yet as harmful as teacher turnover is, the alternative can have adverse consequences as well. As Singh and Billingsley (1996) discussed, not all unsatisfied teachers leave their positions. Those teachers who lack the needed skills for other types of employment or who fail to secure other teaching positions may continue on, unsatisfied, in their roles as special educators. This is important as job satisfaction (or lack thereof) is associated with measures of teacher quality, performance, and organizational commitment (Bogler, 2002) as well as work motivation (Thomas, 2010). Thus, dissatisfied teachers who remain may act as "dead weight," putting less effort and enthusiasm into their work while becoming increasingly detached from their jobs (Adera, 2010; Singh & Billingsley, 1996, p. 42). This is especially true today, given the current economic climate. Jobs are scarcer and many teaching positions in districts across the nation are being slashed as funding is reduced. Instead of seeking other employment, many unsatisfied and ineffective teachers may be clinging to their current, tenured positions out of sheer financial necessity (Abrams, 2005). Thus, whether teachers choose to stay or leave the profession, the factors leading to their dissatisfaction are important in that both attrition of qualified teachers and
retention of burned out educators are similarly problematic in the field in terms of making adequate progress with these students.

Problems of Teacher Affect

Problems of teacher affect are well-documented. Half of all teachers interviewed admit that, if they could go back in time, they would have chosen different careers (Kwong, Wang, & Clifton, 2010). This statistic would almost surely be higher for teachers of students with EBD given their extraordinary attrition rates as well as the finding that they are the most dissatisfied among all categories of special education teachers (Adera, 2010; Houchins, 2010; Singh & Billingsley, 1996; Stempien & Loeb, 2002). One of the major complaints of all teachers relates to student behavior. Between 1962 and 2007, teachers' perceptions of student behavior have changed dramatically and bring with them "long-lasting implications for the profession" (Klassen & Anderson, 2009, p. 758). Presently, teachers rate "student misbehavior" as one of the two largest contributors to their occupational stress (with "workload" being the other) (Klassen & Chiu, 2010, p. 343).

Abrams (2005) adds to the list of stressors; teachers working with this disability group experience little support from colleagues, administration, and students' parents; they tend to feel overwhelmed with their workloads for which they consider insufficient time is provided; and they feel stressed in response to working with unruly students and often react emotionally. Billingsley & Cross (2002) report that specifically with this group of teachers, conflict with administrators was a major source of stress; more than three-fourths of these special educators felt unsupported by their administrators. This is unfortunate given the link between teachers' perception of administrator support and likelihood to remain in the field (Prather-Jones, 2011). The work conditions these special educators typically face are important as dissatisfaction is
linked with a number of negative outcomes for teachers. For example, dissatisfaction is associated with absenteeism, attrition, physical and mental illness, and stress (Perrachione, 2008; Singh & Billingsley, 1996). Sources of dissatisfaction have also been found to lead to decreased motivation, decreased job commitment, and decreased student achievement (Houchins, 2010; Klassen & Anderson, 2009; Stempień & Loeb, 2002).

Occupational stress, as defined as the presence of stressors in the environment, is inversely related to job satisfaction as well as intent to remain in the profession (Hanson & Shreeve, 1997; Singh & Billingsley, 1996). Furthermore, jobs that involve "frequent and intense periods of stress" (common in working with students with EBD) place professionals at considerable risk for a syndrome known as "burnout" (Platisdou & Agaliotis, 2008, p. 61). Teachers who are "burned out" may feel overextended, exhausted, negative, cynical, and experience reduced feelings of accomplishment (Agaliotis & Platisdou, 2008). They may begin to display symptoms of physical or mental illness, such as depression (Platisidou & Agliotis, 2008). Unfortunately, negative feelings associated with burnout tend to be contagious. Teachers who project cynicism, job dissatisfaction, or overly critical attitudes often adversely influence their colleagues, students, and even family members (Moè et al., 2010; Agaliotis & Platisdou, 2008). Not only does this mean that burned out teachers are compromised in their own ability to help students, but their negativity may impede the performance of their colleagues. Truly, the difficult working conditions typical for many special educators have the potential to lead to a number of challenging outcomes for the field and its professionals.

Teacher Training, Experience, and Competency

In addition to being highly transient and in chronically short supply, another major challenge relating to the field of EBD is that its teachers are among the least qualified of any
special educators (Sawka et al., 2002). This has been documented in numerous studies. First of all, due to their turnover rates, teachers of this population infrequently have more than five years' overall teaching experience when they begin teaching students with EBD (Sexton, 2010). Many teachers use these positions as a proverbial “foot in the door” from which they move to more desired positions. This, combined with the stress of working with this disability group contributes to the fact that few such teachers keep these positions longer than five years (Gagnon & Leone, 2006). Therefore, those with the least experience are the ones working with those students with the most severe behavioral problems as well as some of the most significant learning needs (Sexton, 2010). Because of the high turnover, these students typically receive much of their education from classroom paraprofessionals or from teachers who lack the appropriate certifications.

Before the passing of NCLB in 2001, Kauffman (1999b) summarized that "[t]he number and proportion of special education teachers employed on emergency or provisional certificates is scandalous" (p. 247). Moreover, teachers of students with EBD are the most likely to be uncertified with "unprecedented numbers of teachers [on] emergency certification" (Kern et al., 2009, p. 27). The fact that so many teachers were essentially unprepared to enter the field is cited as one potential contributor to the stress and frustration levels of both students and staff (Cross & Billingsley, 1994). These teachers may lack the skills to be effective in both academic instruction and behavioral management (Abrams, 2005). Yet, even after the NCLB legislation stipulated that all teachers need to be "highly qualified" for their teaching duties, very little changed. One of the primary goals for this act was to ensure that by the 2005-2006 school year all teachers would hold certification for those subjects they teach (Mooney et al., 2004). In many cases, states simply responded to this mandate by changing the requirements by which teachers could become
"highly qualified" (Mooney et al., 2004). For example, some states allow teachers to simply pass a Praxis II content area test (typically a single one- or two-hour multiple choice test) in order to become fully certified (Mooney et al., 2004).

Perhaps then it is not surprising that in 2006, Billingsley et al. report that still only a small proportion of special educators working with this disability group actually hold certification in the areas they teach. This corresponds with the finding that 82% of school districts allow "noncredentialed teachers to teach, relying instead on emergency permits, waivers, and longterm substitutes" (Sawka et al., 2002, p. 223). Gagnon and Leone reported that 20% of teachers of students with EBD were "either not certified, had temporary certificates, or had a probationary certificate; this is in addition to those teachers who hold teaching licenses but teach subjects for which they have not received pre-service content area training (2006). Having rigorous pre-service university level education in relevant programs is important given that typical approaches used for teacher in-service training and professional development have not been shown to affect any meaningful and sustained improvement in teacher performance (Fixsen, Blase, Naoom, Van Dyke, & Wallace, 2005). Because the NCLB legislation allows individual states flexibility in deciding how to meet the "highly qualified" requirement, no uniform standards exist and the result "essentially reflects an 'anything goes' philosophy" (Manning, Bullock, & Gable, 2009, p. 219). Thus, federal mandates appear to have been largely unsuccessful in abating the problem of large numbers of unqualified teachers (Simpson et al., 2011). This is troubling given that holding valid teacher certification was "strongly correlated" to students’ achievement in math and reading (Gagnon & Leone 2006, p. 54). Cooley-Nichols (2004) further caution that poorly trained teachers may "struggle to provide a safe, healthy, and stable environment and [may be] too overwhelmed to focus on best practices and academic
instruction (p. 29). If true, this situation contributes considerably to the difficulty the field is already experiencing in helping these children.

Identification and Referral Issues

Numerous problems exist in the field of special education with regard to the proper and timely referral and identification of students with EBD. These primarily relate to the issues of late-, under-, or misidentification/referral of students for needed behavioral services. Walker et al. (2000) comment that "if our goal were to actually prevent addressing the needs of this student population, we would be hard pressed to do it any better than we currently do" (p. 35). Kauffman (1999a) provides an especially insightful analysis of the plethora of factors which serve to undermine the prevention and timely treatment of this disability:

Prevention may be thwarted by expressing overriding concern for labels and stigma, objecting to a medical model and failure-driven services, preferring false negatives to false positives, proposing a paradigm shift, calling special education ineffective, misconstruing the least restrictive and least intrusive intervention, protesting the percentage of children receiving services, complaining that special education already costs too much, maintaining developmental optimism, denouncing disproportional identification, defending diversity, and denying or dodging deviance (p. 448).

Walker et al. (2000) argue that schools should not be actively seeking to deny students at risk of developing severe problems services on the basis of upholding these kinds of philosophical beliefs. Yet, the reality is that childhood EBD is chronically under-identified and thus under-served; fewer than 1% of students are found eligible for special education services under the federal category of ED while prevalence estimates continue to project the actual number of students in need of such services at figures at least five times as high (Kern, 2008;
Landrum, Katsiyannis, & Archwamety, 2004; Lopez & Forness, 1996; Simpson, Peterson, & Smith, 2011; Walker et al., 2000). Another cause for the persistent under-identification of students with EBD not listed by Kauffman concerns the exclusionary social maladjustment clause in the federal definition of ED. That is, according to federal law, students exhibiting disruptive and aggressive behaviors who are deemed by eligibility team members to be "socially maladjusted" cannot be found eligible for special education services unless it is also deemed that they have an emotional disturbance (Lopez & Forness, 1996). This is somewhat illogical in that the second criteria in the IDEIA (2004) definition for ED is that individuals demonstrate "[a]n inability to build or maintain satisfactory interpersonal relationships with peers and teachers" which suggests the very concept of social maladjustment (Section 300.7(b)(9)). Gresham and members of Project REACH (2005) reason that "[t]his logic is convoluted, circular, and borders on oxymoronic. The social maladjustment clause in the ED definition excludes and includes a portion of students in the same sentence" (p. 330). Yet despite the confusion the federal definition has created for professionals in the special education eligibility process, it has nevertheless remained unchanged into the present through the reauthorization of IDEA in 1997 to IDEIA in 2004 (Olympia et al., 2004).

The misidentification of students with EBD into other eligibility categories is another factor which pervades the field. This occurs for many of the aforementioned reasons described by Kauffman. Lopez states that research suggests that over half of those children who are eventually identified as having EBD were first classified as having LD (1996). This may have the effect of causing children with EBD to miss out on early intervention treatment for their most urgent needs as they are more likely to be placed in programs primarily intended to serve students with learning problems (Lopez & Forness, 1996). The prevalent practice of
misdiagnosing this group appears to result from a convergence of factors including, a) as Walker et al. (2000) put it, "a remarkably consistent reluctance over the past few decades" by school staff to identify children as having EBD and by parents to accept this eligibility due to the stigma it carries (p. 30; Landrum et al., 2004); b) the relative ease associated with the discrepancy model by which many students, until only very recently, may have been classified as having LD—in accordance with IDEA, students could be classified with this disability so long as a difference (typically of one standard deviation) existed between their IQ and at least one area of academic achievement—compared with the subjective and often more difficult process for qualifying a student for an EBD diagnosis (Lopez & Forness, 1996); and c) the frequent comorbidity between EBD and learning difficulties making an alternative diagnosis of LD an option in the eligibility process for so many cases. Misdiagnosis of students with EBD into other categories of disability when ED is the most relevant serves to further mask the true prevalence of this population and therefore, the relative urgency with which the needs of this disability group should be prioritized.

A decade and a half after Lopez discussed these difficulties they are still very much problematic for the field of special education.

A third obstacle relating to the field of EBD relates to the lateness with which these children begin receiving appropriate services. In early childhood, children displaying significant behavioral problems are infrequently provided with prereferral services to meet these needs (Del’Homme, Kasari, Forness, & Bagley, 1996). Generally, services are not provided until students are finally referred formally to the special education eligibility team (Del’Homme et al., 1996; Walker et al., 2000). Unfortunately, only 17.4% of children with EBD are identified by age 9 while fewer than half are identified by 12 years of age (Del’Homme et al., 1996; Trout et al., 2006). Numerous research studies spanning several years suggest a considerable lag time
between symptom onset and formal identification (Forness et al., 2000). This means that these individuals may go several years, as opposed to following early symptoms, before their behavioral needs are properly addressed. Lamentably, this is, as Trout et al. (2006) state, already "long after maladaptive behaviors have become deeply rooted in students' social and academic functioning" (p. 207). Furthermore, the finding that students are typically identified late for this disorder corresponds with Kauffman's finding that the adults in these students’ lives "[maintain] developmental optimism" to the disservice of these children (1999a, p. 448). It is especially disconcerting given the finding, summarized by Dunlap et al. (2006) that "[w]hen the challenging behavior of young children is not addressed in an appropriate and timely way, the future likelihood increases for poor academic outcomes, peer rejection, adult mental health concerns, and adverse effects on their families, their service providers, and their communities” (p. 33). Unfortunately, this practice has continued for approximately a quarter century (Trout et al., 2006). Thus, despite the fact that symptoms of EBD tend to manifest at early ages, students with this disorder are, much to their own detriment, identified later in life than any other special education disability category (Hayling et al., 2008). Identification rates for youth with EBD steadily increase with age, peaking at the ages of 14 and 15; in many cases this is a decade after initial symptoms emerged and well past the point where primary or secondary intervention efforts are likely be of any assistance (Walker et al., 2000). Regarding the prevention of EBD, Kauffman (1999a) summarizes that the educational and mental health fields are the “most successful in preventing prevention itself” (p. 448).

Fragmentation and Overlapping Service Delivery

Another obstacle pervading the field of special education relates to the fragmentation and overlap characterizing services for students with EBD. The problem lies in that these various
programs, intended to ameliorate social, emotional, behavioral, learning, or physical problems, are not coordinated with one another; instead, they typically work in isolation and thereby limit their own potency (HRSA, 2006). Osher et al. (2008) explain that “[t]he average school has, at any one time, 14 different prevention practices addressing everything from violence prevention, to dropout rates, to risky sexual behavior, to substance abuse, etc.” (p. 1271).

Within such a system, a child may receive services from any number of disjointed related services whose administrative structures, financial resources, personnel, and objectives are organized into units which are separate from one another and for which eligibility for services is often driven less by need than other factors (Kazak et al., 2010). According to the current paradigm, various professionals including guidance counselors, school psychologists, and other specialists focus on discrete problems, focusing largely on individuals or small groups of students. Adelman & Taylor (2000) give the example that "a student identified as at risk for grade retention, dropout, and substance abuse may be assigned to three counseling programs operating independently of one another" (p. 50). Not only is this practice costly, but it tends to marginalize the effect of any individual intervention program instead of allowing them to work together for synergistic effect (Adelman & Taylor, 2000; Bradley et al., 2008; HRSA, 2006).

Recognition of the counterproductive nature of service fragmentation has finally been recognized by policy makers and leaders in the field. Current literature has called for service integration and the mental health field has begun to pursue solutions to improve effectiveness while reducing redundancy and waste (HRSA, 2006). The HRSA and other agencies interested in children's mental health are attempting to weave together the plethora of extant resources into a cohesive framework (HRSA, 2006). Working toward such a paradigm shift will be especially important for children and youth with EBD given the complexity, diversity, and intensity of their
needs (Bradley et al., 2008). Certainly, this disability group evinces deficits and problems across so many contexts and areas of functioning that no single agency working alone could be expected to effectively address all the challenges. Although progress toward the objective of unifying services varies somewhat across the nation, an enormous amount of work is still necessary to achieve this goal. Therefore, while it is hopeful that solutions to this problem are being discussed, the present, unfortunately, continues to find most school-based educational and mental health supports working "in an ad hoc, piecemeal, and highly marginalized way . . . [none of which is] conducive to effective practice and is wasteful of sparse resources" (HRSA, 2006, p. 16-17).

Shortages of Resources and Services

In addition to the problems of overlap and fragmentation of services available for students with EBD, there is an overall shortage of needed staff and resources for these children. As of the 1990s, there was a nationwide shortage of 6,000 teachers for students with this disability; this number has only continued to grow in the following years (Gagnon & Leone, 2006). This shortage has been documented as contributing to the inferior and inadequate services which typically characterize educational programs for students with EBD. Chronic personnel shortages are increased by severe teacher attrition as well as by the late-identification, under-identification, and misidentification so common with EBD which effectively masks the true prevalence of those affected (Bogler, 2002; Bradley et al., 2004; Hayling et al., 2008; Lopez & Forness, 1996). The HRSA states that schools seldom have even a portion of the needed resources to meet the needs of students with social-emotional and behavioral problems (2006). Adelman & Taylor (2000) posit that "[m]ost schools only offer bare essentials. Too many schools can't even meet basic needs. Primary prevention often is only a dream. The simple fact is
that education support activity is marginalized at most schools” (p. 50). More objectively, Hendrickson, Smith, and Frank (1998) found that 55% of students with severe behavior disorders did not have supplementary or related service of any kind written into their Individualized Educational Programs. Furthermore, this figure only counts those students who were actually receiving special education services; the majority of students exhibiting symptoms of EBD do not even have IEPs and therefore may not receive specialized services of any kind (Kern, 2008). This is true concerning both school-based mental health services as well as those located in the community (Sawka et al., 2002). In fact, 75% of those students who receive any kind of treatment for EBD do so only through their schools' sparse resources (Pollio et al., 2005). Still, estimates state that only one-third of those in need of mental health intervention receive any kind of treatment (Nastasi & Vargas, 2008). Put differently, this is about one out of every 50, or 1.3 million, persons under the age of 18 (HRSA, 2006, p. 3) Thus, the HRSA remarked that "[t]he need is great. The current response is insufficient" (2006, p. 16).

The insufficient response by schools and communities to meet the mental health needs of children is due to a number of factors. First of all, it may be understood within the context of current national priorities. Legislation such as the NCLB Act of 2001 set exceedingly challenging academic goals for student achievement. Schools that fail to keep up with annually rising expectations will fall subject to disciplinary actions up to and including school restructuring. Such mandates tend to push unmet mental health needs to the proverbial backburner despite that "social emotional, and behavioral intensive needs are, in the long run, the most costly to society" (Kern et al., 2009, p. 20).

Neglect for improving mental health interventions in school contexts can also be at least partially attributable to sparse funding. That is, traditionally, funding at the federal level has been
guaranteed for children with developmental disabilities, medical needs, and physical disabilities, but "perennially lacking" for children with EBD (Epstein et al., 1993, p. 127). The stigma carried by EBD appears to be present up to the level of federal policy-making. It would appear that to legislators, students with EBD do not deserve a share of funding equivalent to that of their peers with other forms of disability. Other than responding to legal imperatives, special education departments seldom focus specifically on the needs of students with EBD (Knitzer, Steinberg, & Fleisch, 1991). Private placements for mental health treatment in the community are also extremely expensive which limits its feasibility (Epstein et al., 1993). Furthermore, although teachers overwhelmingly tend to agree that schools should be involved in improving children's mental health (with 38% strongly agreeing and 51% agreeing and only 6% disagreeing) they may lack the knowledge, resources, or both to meet the challenges of students with EBD (Reinke et al., 2011).

Even if teachers had the knowledge necessary to implement effective strategies to target the mental health needs of their students, it is unreasonable to expect that they would be capable of doing so given the amount of time and energy which must be invested in meeting the educational needs of their students. After all, as Adelman & Taylor remind, "[t]heir mandate is to educate" and teachers are evaluated according to their ability to meet the expectations set by their administrators who are undoubtedly influenced by precedents set by NCLB (2000, p. 49).

Overall, it is difficult to expect special educators, specialists, and professionals in the community to affect a great deal of change with such an impacted group of students while operating with such a constrained budget.
Parent/Guardian/Caregiver Issues

Time and again, research has validated the benefit of family involvement into the educational programming of students with disabilities. Unfortunately, a common theme throughout the literature regarding students with EBD relates not only to the disappointing extent to which parent involvement has been achieved but also the various concerns that these parents have for their children's school programs. Unfortunately, Quinn & McDougal (1998) report that parents of children with EBD are sometimes seen as contributing to problems rather than to solutions. In IEP meetings, parents are often relegated to a passive role in planning the details of their child's education (Quinn & McDougal, 1998). Knitzer et al. observe that in many behavioral programs the extent of parental involvement is limited to having parents sign daily or weekly point sheets (1991). Naturally, some parents feel powerless to contribute in more meaningful ways due to uncertainty. As one parent put it, "[i]f I knew what to do, I would have done it long ago" (Knitzer, 1991). Still other parents may not participate as actively as they might on account of the social stigma attached to a diagnosis of EBD (Pollio et al., 2005). After years of hearing about their children's problems, it is perhaps no surprise that many guardians experience embarrassment, feelings of incompetence, worry, fatigue, related family problems, and decreased quality of life—all of which may impact motivation for increased school involvement (Pollio et al., 2005). Meanwhile, parents of children with EBD often receive few, if any, community-based services (Rosenzweig et al., 2002). Put plainly, many parents simply feel "beat up" and "used up." Take for example, the case of the parent of a second-grader with EBD who locked himself in the principal's office and refused to come out (Knitzer et al., 1991). The boy's mother was confronted in the school parking lot by the district's director of special education and told "[w]e never want to see him again" (p. 105).
Guardians of children with EBD have listed several concerns which appear to exacerbate the extant separation between families and schools. Recently, Rosenzweig et al. (2010) listed numerous areas which emerged from qualitative studies. Summarily, parents felt that educators: a) "were not informed about their children's disorders," b) "were not responsive to their children's special needs," and c) "were in stressful relationships with the parents" (p. 419). Parents have also voiced frustrations concerning educational issues. Quinn (1998) summarizes that these were found to stem from a) the lack of centralized sources of information concerning available services, b) difficulties associated with navigating bureaucracy, c) getting different answers to their questions from different professionals, d) educators' use of "esoteric jargon and acronyms,” e) feeling unprepared to participate effectively in IEP and other meetings, f) the rigid and inconvenient hours and locations for various services offered, and g) feeling as though their input is not incorporated into their children's educational plans (p. 192). The fact that many parents feel excluded from meaningful involvement is a problem that challenges the field of special education and the improvement of outcomes for students with EBD. Clearly, programmatic changes are needed which not only address the myriad of academic, social-emotional, and behavioral needs of children but also lead to the meaningful involvement of their parents. One program, formally named the “Comprehensive Student and Staff Support” (CSSS) system, seeking to meet each of these objectives was piloted in the Washoe County School District (WCSD) of northern Nevada in the 1990s. Having experienced considerable success with students with mental health disorders and diagnoses of serious emotional disturbance, this special education program has recently been expanded to service elementary aged students with EBD across the entire district.
Comprehensive Student and Staff Support (CSSS) System in the WCSD

CSSS Program Background

Professionals across multiple disciplines in the WCSD in deciding to attempt to meet the challenges facing the field of EBD collaborated to create a unique, multimodal intervention program. For more than a decade, the WCSD Research Team (comprised of school psychologists, behavior analysts, special educators, and child psychiatrists) has collaborated to develop the Comprehensive Student and Staff Support (CSSS) system. The CSSS program was developed in accordance with The Theory of Change also created by this research team. The result is a dual-approach, school-based mental health intervention package which attempts to improve the educational programming of students with EBD through two broad components. The first of these is the Behavior Support Framework which is composed of a combination of Applied Behavior Analysis (ABA) techniques and best practices in education aimed at improving student outcomes by affecting improvements in behavior, social-emotional, and academic skill sets. Second, the System of Teacher Support provides monitoring and support to teachers and paraprofessionals regarding program implementation. The intent is to ensure staff members are able to fulfill their responsibilities in an exemplary and professional manner. It is also hoped that efficacy in the System of Teacher Support will improve perceptions of self-efficacy and job satisfaction among staff members. Follow-up surveys and interviews with CSSS staff members have already validated that this intervention has been effective in improving both their overall competency (including accuracy, consistency, and fidelity of program procedure implementation) and job satisfaction (Sexton, 2010). Although staff reports also claim “increased academic outcomes for students” more formal procedures are necessary in validating the
Behavior Support Framework. As Sexton (2010) puts it, the program “is fully developed and is currently being implemented in WCSD, and is ready to be rigorously evaluated” (p. 2).

Behavior Support Framework

The Behavior Support Framework represents that portion of the CSSS which is aimed at directly improving student outcomes; the second approach seeks to improve student functioning indirectly by assisting the staff who work with them. The Behavior Support Framework of the CSSS is described fully in the program manual, *Social Intervention Program: 2010-2011*. A concise description of this student oriented intervention follows. The purpose of this study is twofold: a) to investigate the extent to which the CSSS has reached its goals as stated in the manual through the implementation of the Behavior Support Framework, and b) to interpret the results of the program evaluation in terms of their probable impact to students.

The CSSS is being implemented across five self-contained, special education elementary school classrooms (known as Social Intervention Programs, or SIPs) in the WCSD. As with SIPs, the CSSS system is not a place; rather it is a program "which incorporates a range of settings, from self-contained classrooms to full-inclusion" within the general education environment accompanied by staff behavioral support (Silva & Sexton, 2010, p. 3). Each site accommodates up to 30 students and is staffed by special education teachers, paraprofessionals, and collaborates with general education teachers for students transitioning out of the program. The Behavior Support Framework features a level system (1-5). Students move up through the levels as they demonstrate mastery of various pro-social behavioral skills and consistent completion of academic work. They may move up and down through these levels as their behavior fluctuates throughout time with the ultimate goal of working their way back to a full-
time placement in general education environments (not including time spent in resource settings for academic remediation or with a related services specialist per their IEPs).

Reinforcement and Data Collection Methods

Students receive verbal feedback as well as visual feedback (marks on daily point sheets located on students’ desks) in response to desired or undesired behaviors. Desired behaviors include: On-Task, Teacher Attention (TA), Following Instructions (FI), Calm Person (CP), Accepting Criticism (AC), Accepting No (AN), Problem Solving (PS), Peer Cooperation (PC), Ignoring, Disagreeing, Transition, Manners, Work Completion, and Home Note Completion. Undesired behaviors include: Off-Task, Blurting, Out of Seat, Verbal Aggression, Physical Aggression, Property Destruction, Destruction of Point Sheet, and Stealing. For most behavioral categories, point sheets are marked either every five minutes or as necessary in response to student behaviors. Regarding Work Completion, students may be eligible to earn a point every 30 minutes; Work Completion is a score rated as 0, 3, or 6 for each academic subject. Students may also earn 0, 3, or 6 points daily for having a home note signed by a parent and returned the following morning. Some individual sites offer additional incentives, such as completing and returning homework, or demonstrating appropriate behavior on the school bus. However, these will not be investigated by this study due to inconsistency across sites and circumstances. For example, not all students ride the school bus; students are not assigned homework every day and homework may be assigned more or less often by different teachers or at different sites. Some sites also award students 10 noncontingent points each day simply for attending while others do not. Overall, regardless of these relatively few variations, staff members strive to assign far more positive points than response costs. Silva & Sexton (2010) advise staff members that ideally
"[t]here should be a minimum of 5 positive feedback statements for every response cost given" (2010, p. 18).

At the end of each day, the number of points that a student earns (from desired behaviors, work completion, and home note completion) is tallied and recorded. Response costs are calculated by multiplying the number of marks for individual behaviors by their respective point values—for example, each Blurt costs one and each Out of Seat costs three points. Categories for desired behavior are not weighted; each instance of prosocial behavior counts as one point. Thus, the number of points a student earns each day is the difference between total points earned and total response costs. Points students earn are available for them to spend through the program's token economy. Additionally, each student is rated as having an "Excellent" or "E" day, "Satisfactory" or "S" day, or "Unsatisfactory" or "U" day. Some school sites prefer different respective terminology such as a "Green," "Yellow," or "Red" day though the concept is identical. The determination of students’ daily rating depends on their performance and is evaluated by criteria specified in the program manual. After earning a certain number of Excellent or Unsatisfactory days within a given time period (3, 5, or 10 days depending on the circumstances), students will either graduate to higher or descend to lower levels.

Students’ level status within the program dictates the types of privileges and reinforcers children may access on a daily or weekly basis. Daily privileges include: recess, social time, free time with adult staff, computer time, being assigned as a classroom helper, access to toys at recess, spending lunch with general education peers, visiting the general education classroom, access to elective-type classes (i.e., art, computers, or music), access to school field trips and assemblies, access to preferred activities and personal property (e.g., playing with a toy brought from home). Weekly privileges include visiting the student store and participation in Friday
activity. All students, regardless of their behavior, are given the opportunity to visit student store where accrued points may be spent on tangible reinforcers (e.g., toys and prizes). Students who have behaved poorly throughout the week will experience the natural consequence of having minimal purchasing power. Friday activities are planned by staff members for the students and are intended to be enjoyable social events. They may include movies, special art projects, sports, games, or cultural experiences. In order to participate in Friday activities, students must meet certain behavioral criteria. Therefore, the CSSS program utilizes a combination of several types of reinforcement. Reinforcement schedules include a) fixed interval reinforcement (through student point sheets), b) variable ratio reinforcement (through student point sheets), c) differential reinforcement (through work completion and home note completion) d) immediate reinforcement (through verbal praise and student point sheets), and e) delayed reinforcement (through Friday activity and access to general education events). Punishments come in both immediate forms (primarily through student point sheets) and delayed forms (by becoming ineligible for Friday activities). Point sheets are collected by staff members at the end of each day. The data from each sheet is transferred to computerized spread sheets to facilitate later analysis and individual goal setting for students.

The two primary objectives for the Behavioral Support Framework intervention of the CSSS program relate to affecting positive changes in a) students' social/emotional/behavioral functioning and, b) students' academic performance. Regarding the former objective, this intervention is intended to effect positive changes the frequency of pro-social or desired behaviors of students; it is simultaneously intended to decrease the frequency of disruptive or undesired behaviors. Regarding the latter objective, this intervention is intended to effect positive
changes students' Work Completion scores as well as their performance on the Fall, Winter, and Spring Math and Language Arts benchmark tests.

**CSSS Program Evaluation**

Integral at all phases of intervention program development is assessment. Assessment "can be said to drive the design and modification of interventions" (Steege et al., 2007, p. 93). Regarding school-based interventions, assessment plays a useful role in determining the characteristics and needs of a population, students' baseline performance, and for analyzing environmental variables (Steege, Mace, Perry, & Longenecker, 2007). These results will inform the initial development of an intervention program. Throughout the implementation of a program, assessment may be conducted to gather formative feedback. Ideally, assessments during an intervention are systematic and occur at regular intervals (if not continuously) (Witt, VanDerHeyden, & Gilbertson, 2004). Post-facto assessments evaluating past program data may also be referred to as "program evaluation," "evaluation research," or simply "evaluation."

Rutman (1984) offers a definition of program evaluation which seems to have stood the test of time. That is, "[p]rogram evaluation entails the use of scientific methods to measure the implementation and outcomes of programs for decision-making purposes" (p. 10). Therefore, evaluation is a crucial final step in the process of program development; it is during this time that progress toward a program's stated objectives is measured.

**Choosing Evaluation Research**

Evaluation research is important for the field of special education for several reasons. First of all, as is especially true in education, new theories, philosophies, and ideas abound. Change is the norm and experts and advocates proposing new educational approaches, techniques, strategies, and paradigms are ubiquitous. In some cases, educational practices are
promoted by rhetoric, perception, or opinion alone where more reliable forms of evidence are absent. This is especially true in the case of inclusion. Some proponents of this practice argue for full inclusion into the general education environment for all students with disabilities. The underlying belief appears to be that having such students educated in the same environment as their non-disabled peers promotes socialization and age-appropriate behavior. Furthermore, it is believed that inclusive placement carries benefits which outweigh those attainable through placement in programs designed specifically to meet students’ learning needs. Smith & Smith (2000) describe how teachers share a "fundamental value of inclusion" despite the lack of supporting evidence (p. 161). When interviewed, such teachers make moving statements such as "I’ve always had special needs kids in my room ... it was always just refreshing for me to know that they could come in and they could feel safe, they could feel secure, they could feel accepted” (p. 166). School districts cite as an indicator of progress increases in the percentage of students with IEPs placed in general education classrooms without any evidence that doing so has resulted in any tangible improvement in achievement (Landrum et al., 2004). The push to increase inclusion has led to some schools going so far as to not offer any resource classes to students, instead designating their sites as "inclusion-model" programs. The efficacy of inclusion appears to be accepted as truth by many in the field without rigorous examination. Conversely, educators who question or oppose this practice find that it is politically incorrect to do so, or, as Long (1994) put it, "[t]o be against inclusion is like being against God, Country, Motherhood, and Elvis" (p. 14). Some special education administrators in this author’s district of employment have bumper stickers outside their offices stating, “We LOVE Inclusion,” making clear to any passers-by their stance on the issue. Evaluation research is a means through which
educators can become properly informed about the benefits of any instructional practice or methodology in an empirical fashion removed from rhetoric, philosophy, or opinion.

The overuse of teacher self-report data is another example of how teaching practices may become promoted through perception and opinion in lieu of more valid means. The over reliance on surveying or interviewing teachers during evaluation of educational interventions is another trend which has impeded data-driven decision making in special education (Wickstrom, Jones, LaFleur, & Witt, 1998). Self-report techniques cannot assess the degree to which the intervention was implemented with integrity or fidelity. Secondly, it is impossible to translate anecdotal observations into quantifiable terms. Thirdly, teacher responses may be easily influenced by outside or unrelated circumstances. Best practice in research evaluation requires that several factors be considered when judging the merit of a given intervention or program. These include the amount of research showing benefit from the practice, the methodological quality of these studies, the replicability of the studies' findings, the effect sizes demonstrated by the intervention in question, and the durability and generalizability of those findings to local settings (Horner et al., 2010). It is difficult to satisfy many of these evaluation criteria through subjective means such as teacher self-report, survey, or interview. Instead, the thorough examination of empirical data characteristics of research evaluation can help stakeholders determine the extent to which an intervention was deemed beneficial for students over time. This is a step in any professional practice which should be taken by policy-makers and other stake-holders in order to lead to informed decisions regarding whether programs should be halted, modified, or expanded (e.g., adopted by additional school districts). After all, as Horner, Sugai, & Anderson (2010) explain, "[t]he question is seldom 'is there evidence?' but 'is there sufficient evidence to allow unequivocal documentation that a practice is effective?'" (p. 3). Perhaps particularly true in the
field of education, differences in cultural and individual factors across geographic areas compromise generalizability thereby increasing the need for research with local or specific populations (Daly III, Martens, Barnett, Witt, & Olson, 2007; Horner et al., 2010). Program evaluation of the CSSS system will directly meet this need for the WCSD.

The second reason in support of program evaluation relates to professional accountability. The movement for accountability in public education has never been stronger or more sweeping than since the beginning of the 21st century. Given the current political climate, heavily influenced by federal and legal mandates (e.g., NCLB and IDEIA), research evaluation has become an essential component of professional practice (Stichter & Conroy, 2004). Mandates from such legislation require educators to use only practices which are scientifically based (Stichter & Conroy, 2004). Vocabulary found in recent literature including "data-driven," "evidence-based," "solution-oriented," "problem-solving," and "empirically-based" reflect the renewed vigor which has emerged to establish quality standards for professional practice in the schools (Nastasi & Vargas, 2008). Professional research publications have increasingly adopted in their mission statements language promoting the application of research in the field of childhood EBD (Clarke, Dunlap, Stitchter, 2002). Naturally, the increased interest in the use of evidence-based practices and growing emphasis on accountability has lead administrators, teachers, counselors, specialists, and other educators to fall under increased scrutiny. Individuals in each of these roles are expected to provide empirical data validating the benefit of their work with students (Depoy & Gilson, 2008). Doll and Cummings (2008) explain, "[a]t regular intervals it is critically important that the school step back and examine the ultimate question: Have we been effective in strengthening the social, emotional, behavioral, and academic competence of our children?" (p. 1343). Not only is answering this question important for one's
professional practice but, perhaps more than ever, being able to satisfactorily answer this question has itself become a skill upon which the existence of one's position may rely. Those who work with students identified as having EBD are no exception. The importance of using scientifically-validated approaches in the classroom with these students, given the current educational climate of accountability and the "stable trend of poor outcomes" of students within this population, has never been more important than in the present (Bradley et al., 2004; Clarke et al., 2002; Hayling et al., 2008, p. 27). Given the economic shortfalls faced by many school districts, few programs are likely to be exempt from careful scrutiny.

By June 2011, the WCSD was faced with a loss of local, state, and federal dollars for the 2011-2013 biennium in excess of $100 million resulting in a $75 million shortfall in its planned budget (H. Morrison, e-mail to WCSD personnel [e-mail], January 26, 2012). This reality is requiring policy-makers to make budget cuts and program eliminations at an alarming pace (Washoe County School District, 2010a). The need for educational expenses to be justified in terms of the relationship between program cost and student benefit is the third major reason that program evaluation is crucial today in the special education profession in general and in the WCSD in particular. Local contexts illustrate this point well. The WCSD has recently frozen certified employee salaries (i.e. teachers, counselors, administrators), reduced insurance and retirement benefits while increasing employee contributions, implemented furlough days, eliminated positions and programs, increased average classroom sizes (from 20:1 in 2009-2010 to 22:1 the following year), increased specialist caseloads, and is decreasing the pay scales of certain administrative positions (NDE, 2011) (H. Morrison, e-mail, January 26, 2012). Because more than 89 percent of district expenses are related to personnel and additional money will be cut in revising the budget, it is anticipated that several employees will be dismissed prior to the
2012-2013 school year. Additionally, programs such as the Sexual Health And Responsibility Education (S.H.A.R.E.) program has been eliminated. All S.H.A.R.E. teachers save one lost their positions at the end of the 2010-2011 school year. In their stead, general education Health and J.R.O.T.C. teachers have been assigned with the responsibility of incorporating sexual education into their already full curricula and teaching schedules. These middle and high school teachers were trained by the one remaining S.H.A.R.E. teacher. During the 2011-2012 school year, district administrators held discussions for how other professional positions could be similarly reduced or reconfigured. Meanwhile, the district as a whole is initiating redoubled efforts to recruit volunteers from the community to help compensate for the loss of paid staff in many schools. Economic forces driven by the present recession have made program evaluation and professional accountability important for more than ensuring best professional practice; sparse funding is causing administrators and educators to have to compete for the existence of their positions and programs. There is no better way to advocate for money or additional positions than with data that is collected using sound evaluation research methods.

The recent funding shortage in Nevada's public education system makes it incumbent on policymakers to ensure that remaining monies are allocated prudently. There is an obligation to both taxpayers and educators to determine whether the CSSS system, recently implemented in the WCSD, is a worthwhile investment. This is especially true considering its cost. While exact figures are not available, a large sum of money is invested annually in each student enrolled in these Social Intervention Programs (SIPs). The operating budget for the 2009-2010 school year allocated $7,163 per pupil (WCSD, 2011b). The teacher-student ratio for SIP classrooms is no larger than 10:1 (three teachers per CSSS site which has a maximum enrollment of 30 students) (Sexton, 2010). Depending on enrollment, the actual teacher-student ratio tends to vary between
1:5 and 1:8. Therefore, an SIP with full enrollment has more than double the teacher-student ratio, while actual sites have teacher-student ratios of triple or quadruple those of typical WCSD classrooms. Additionally, each site is staffed with enough paraprofessionals (teaching assistants) to have one per classroom. Additional buses and bus drivers are required at CSSS sites in order to transport these students to and from areas beyond that of typical busing routes to their designated SIP classrooms. Finally, the WCSD contracts with UNR's Psychology department and its school of medicine for consulting services for masters'- and doctoral-level behavioral analysts, child/adolescent psychiatrists and the fellows they supervise. These individuals who consult at the CSSS sites come at a cost to the WCSD. Therefore it can be reasonably estimated that the WCSD invests between three and four times as much in its elementary EBD students as it does for average per-pupil spending. At typical CSSS enrollment, this figure would be about five to six times as much. At $7,163 per typical student, this amounts to roughly $25,000 (between $21,489 and $28,652) per year for each child enrolled in the CSSS program. Given that there are five CSSS sites which can each accommodate 30 students, the total annual investment in the elementary school students with EBD attending CSSS sites can reasonably be placed roughly between $3.25 million and $4.25 million for the WCSD alone (five CSSS sites multiplied by a 30 student maximum multiplied by $7,163 multiplied by three or four equals $3,223,350 or $4,297,800, respectively). Furthermore, this estimate does not take into consideration those costs which are separate from the specific provisions of the CSSS program classrooms; that is, these special education students incur additional costs regardless of whether the CSSS program is continued or cancelled. These costs include assistive technologies, related services, and supports up to and including one-on-one adult teaching aides written into their IEPs as well as costs from hierarchical special education administrative infrastructure.
Given the costs incurred by any school district in launching an initiative requiring new materials or software and retraining of professionals, it seems imprudent for changes to be made carelessly. It is well understood that teachers and others in the education profession are frequently required to discontinue older methodologies, including programs, interventions, and curricula, in favor of newer ones. For example, in just the past few years, the present author—a special educator in the WCSD—has been required to make several such changes. Beginning in the 2009-2010 school year, the WCSD moved away from its previous IEP writing software, S.E.S.P. and retrained hundreds of special education teachers and related service professionals to use EasyIEP instead. In the same year, another major software program, known as “S.A.S.I.” was being replaced as well. This program was used by thousands of district personnel in diverse roles to access and manage student information (including parental, background, demographic, academic, disciplinary, and other student data) and was ultimately replaced by Infinite Campus. Because S.A.S.I. was used regularly by so many educational professionals, scores of training sessions had to be held to accommodate all the school personnel who would require retraining. The very next year, the district-wide e-mail system, Groupwise, was replaced with Microsoft's Outlook program. Confusion was created as staff moved from one server to another (between which they had different e-mail addresses and log-on information) over the course of several months depending on their work site’s placement on the Instructional Technology's service schedule. Beginning with the 2011-2012 school year, the Edmark software, used in student benchmark testing, was replaced with the "Measures of Academic Progress" (MAP) assessment program. Additionally, the computer-based learning and credit recovery software known as "P.L.A.T.O." was replaced with A+nywhere (sic) Learning System (commonly referred to just as "A+"). These are a few examples of how each of these changes carries with it a new learning
curve, the collective loss of staff proficiency in the previous method, and considerable financial costs related to acquiring new technologies and staff training. All too common among some educators is an attitude that becoming proficient in the present approach isn't important since it will "probably be something else in a few years anyway." While the cost of retooling teaching staff in order to implement more effective practices, software, or teaching materials is often justifiable, decisions to replace one approach with another should not be made in the absence of reliable information. This evaluation research study represents an effort to collect the kind of information which can lead to informed and data-driven decision making for educational approaches with a highly impacted student population.

A fourth reason justifying the need of evaluation research with special education programs relates to the student population itself. That is, the argument can be made that the more impacted a population is, the greater the need for early and effective educational intervention. Given the acute and widespread needs inherent within the EBD population, a great deal is at stake if these students’ symptoms are not ameliorated. The costs to society when a child fails to succeed during his schooling years are staggering. For example, in Nevada alone, a 1% increase in the male high school graduation rate would have an annual positive economic impact of approximately $20 million (WCSD, 2010b). From this increase, over $50 million would be saved in health care costs and roughly $5 million in college remediation costs (WCSD, 2010b). Therefore, in addition to those reasons which relate to professional ethics, desire to implement “best practice” approaches out of concern for the welfare of those children concerned, a strong financial incentive exists for society in terms of identifying and implementing the most beneficial approaches possible with the EBD population. Especially in the midst of an economic
recession, the knowledge that the best educational intervention may, in the long run, be the cheapest to society, strengthens the argument justifying evaluation research.

A fifth reason justifying this program evaluation study is that a thorough investigation of the CSSS intervention package will provide valuable feedback to administrators overseeing and practitioners implementing it in the WCSD. This information will ultimately inform one of the following three general conclusions: a) the CSSS program is ineffective in most, if not all, respects and should be replaced entirely, b) the CSSS program appears to be beneficial in some respects but can be improved upon in others, or c) the CSSS program appears to be highly beneficial for its targeted student population and should be continued with few, if any, modifications. Regardless of which conclusion is reached, attaining this knowledge is crucial. If the first conclusion is the best supported, then the sooner this is learned, the faster WCSD personnel can be tasked with the responsibility of implementing a different intervention. Early intervention is always preferable to later intervention with persons with disabilities. If the second conclusion is best supported, an in-depth program evaluation will yield results allowing WCSD personnel to correct any weaknesses uncovered. Finally, if the third conclusion is best supported by the data, knowledge of the CSSS system can be shared with the rest of the state and the program can be implemented on a wider scale.

A sixth reason supporting the use of evaluation research with the CSSS program is that the findings could have positive implications well beyond the WCSD for both practitioners and researchers. Severe social-emotional, behavioral, and academic problems with this disability group are of national concern. This is particularly true due to current political pressures for school improvement stemming from the No Child Left Behind (NCLB) legislation. The chronic resistance of this group to respond to instruction contributes to what are commonly referred to by
administrators as "red cells." Red cells refer to specific categories of the student population which are not demonstrating academic growth from one year to the next. Because failure to make Adequate Yearly Progress (AYP) as stipulated by NCLB carries stiff consequences for schools, the improvement of this student group is of urgent concern to school districts across the nation. Should the CSSS program be found effective in meeting its goals for student achievement, it could become a valuable addition to the field for practitioners.

The seventh and final reason justifying the use of this program evaluation study is that researchers in the educational field are likely to benefit indirectly from evaluation research relating to children with EBD. Such a study would supplement the sparse research extant in this area. Program evaluation adhering to these best practice guidelines works to reverse the "practice-research separation" (Depoy & Gilson, 2008, preface). Furthermore, well-designed research investigating interventions intended to improve the academic achievement for this disability are scarce (Hayling et al., 2008). The reason for this appears to originate from trends early in the history of behavioral psychology.

Since the 1950s, the method of evaluating behavioral interventions favored by behavior analysts has been the single-subject research design. Although numerous interventions were studied with such designs, the generalizability from any individual study was fairly limited. Although the trend in recent decades has been the inclusion of somewhat larger sample sizes, studies examining the effects of intervention programs at the systems level remain sparse (Hurley et al., 2010). Researchers and practitioners relating to children's mental health have begun advocating for the use of evaluation research as the best way to assess a program's relative merits and weaknesses. Undoubtedly, part of this trend is due to the utility of evaluation research improving current programs and developing future ones. Program evaluation has led to
constructive feedback to facilitate the development of effective comprehensive programs (Nastasi & Vargas, 2008). As detailed data are gathered and analyzed, researchers can identify which specific practices within intervention programs are especially potent. Through this process, they may compile lists of these "core components" and design intervention packages incorporating the most effective components (Nastasi & Vargas, 2008). Thus, a rigorously designed study investigating not only the efficacy of a behaviorally-based educational program seeking to improve academic achievement within the EBD population, but which also reports findings across a moderate to large sample size should represent a valuable contribution to the extant knowledge base in this area.

**Decision-Making Factors**

Ultimately, the question "Does the CSSS adequately achieve its stated objectives for improving students' behavioral, social-emotional, and academic functioning?" must be answered. The program objectives for the CSSS written by Silva & Sexton (2010) are threefold: a) "to help children acquire and develop effective, pro-social behaviors," b) "to support the children to make adequate academic progress," and c) "to extinguish behaviors that are impeding students’ ability to be successful in the regular classroom" (p. 3). In evaluating the effectiveness of the CSSS system’s Behavior Support Framework, both program and school district data will be examined. Student point sheet data collected from the 2011-2012 school year across all five sites will be thoroughly analyzed. Statistical analyses will be likewise used to identify significant differences across behavioral categories. Visual analyses of graphic data will also be conducted to identify trends in various aspects of students' performance at all sites, both individually and collectively. Data from three primary sources of evidence will be of particular interest in this study. The first relates to the frequency of desired behaviors of students (both aggregated and by specific
category). The second relates to the frequency of undesired behaviors (both aggregated and by specific category). Thirdly, school district data will be accessed in order to examine students' performance on Math and Language Arts benchmark assessment across the 2011-2012 school year. Statistical analyses will be applied to determine whether positive significant differences exist in student scores across the Fall, Winter, and Spring administrations. Because benchmark assessments are not administered until the 2nd grade, students in grades K and 1 will instead be studied through analysis of their Work Completion scores. In order to reach a conclusion which supports the use of the CSSS program, statistical analyses should indicate significant improvements occurred in at least two out of these three areas of student functioning.

It is important to clarify the reason that the third source of evidence for the CSSS system only requires a simple statistically significant difference in students’ benchmark scores. After all, one might rightly ask "Wouldn't students be expected to improve their language arts and math skills as they mature?" While this is a reasonable assumption, it is not necessarily true with students identified with EBD. As earlier described at length, acute and pervasive learning problems are more the norm than the exception for this population. A longitudinal study described by de Lught (2007), for example, compared the academic progress of 42 students identified with EBD against 61 students diagnosed with LD over a five year time period. Baseline testing for these groups occurred in Kindergarten/1st grade and demonstrated that both groups were below average in mathematics and reading skills and that the LD group was lower in reading than the EBD group. Students in both groups received specialized supports although the EBD group actually received "significantly more special education services during this period" than did students with LD (p. 114). Yet, by the 5th/6th grade follow-up, only the group with LD was described as having made “significant progress” (de Lught, 2007, p. 114). At this
follow-up, the LD group exhibited higher reading scores than the EBD group despite initially performing lower. Findings such as these attest to the "stubbornness" of the academic deficits and learning difficulties experienced by school-aged children with EBD. Therefore, should students attending classrooms implementing the CSSS system’s Behavior Support Framework show growth at the $p < .05$ level in their Math or Language Arts benchmark scores across a single school year, this will be considered evidence that the CSSS is helpful in improving student achievement.
CHAPTER III: METHODOLOGY

Overview

The purpose of this study is to evaluate the extent to which the five elementary Social Intervention Program (SIP) classrooms implementing the Comprehensive Student and Staff Support (CSSS) Behavior Support Framework in the Washoe County School District (WCSD) of Nevada met their objectives relating to student improvement in behavioral and academic areas of functioning. This program evaluation investigates both how these five sites have performed individually as well as together as a singular unit during the 2011-2012 school year. This study examines behavioral data collected from the SIP classrooms as well as academic data from students’ Measures of Academic Progress (MAP) benchmark test scores. An analysis of these data might lead to important insights about student behavioral and academic functioning across the 2011-2012 school year. This chapter addresses the study’s research design and includes demographic data from the participating school district. Also included are descriptions of the evaluation instruments used, relevant variables, data collection procedures, and statistical procedures including a rationale for those approaches selected.

The Researcher

The researcher is a special education teacher working with middle and high school students in a self-contained day treatment program within the WCSD. The researcher claims no bias in interpreting the results of this study; he is neither looking to endorse nor discourage the use of the CSSS model through this program evaluation. Furthermore, the researcher does not stand to benefit, personally or professionally, from any particular results from this study. Rather, the researcher has pursued this research evaluation due to a long-standing professional and academic interest in this area.
Student Demographic Data

The Washoe County School District of Northern Nevada can be described as a middle-sized school district with limited economic resources, a rapidly growing minority population, and a high student transiency rate. The elementary school students participating in this district’s SIPs implementing the CSSS program are drawn from across all of Washoe County. There are five elementary SIP sites into which students are placed according to location. Therefore, students in this study will represent a cross-section of a specific disability population (students with EBD) across the entire district.

The WCSD serves over 62,000 students across 64 elementary, 16 middle, and 12 comprehensive high schools. In addition, there are two special education schools which serve grade levels spanning multiple grades (e.g., K-12 or 7-12) and a few alternative high school programs (e.g., for adult education, specific vocational training, or for students with behavioral problems) (WCSD, 2011b). This figure does not include students enrolled in the eight charter schools in this district. The WCSD is one of northern Nevada's largest employers with over 4,000 certified staff (e.g., teachers, counselors, specialists, administrators, nurses, librarians, etc.), approximately 1,700 classified employees (e.g., food service, transportation, office, and custodial staff), and some 1,300 substitute teachers (WCSD, 2011b). The average classroom size for elementary grade students is 22; for middle and high school level students, the mean student to teacher ratio ranges from 25:1 to 28:1 depending on the academic subject (NDE, 2011). Student to teacher ratios are much smaller in the self-contained special education SIP classrooms. The maximum capacity for an elementary site (each staffed with three teachers) is 30 students though actual student enrollment is frequently smaller (Sexton, 2010). The WCSD currently employs 15 licensed special education teachers for this program (Sexton, 2010).
Therefore, the maximum caseload for each of these CSSS program teachers is 10 with typical caseloads ranging from five to eight.

Table I summarizes WCSD’s student demographic data. Beginning with the 2010-2011 school year, WCSD became a minority majority district; just over 50% of its students are categorized as an ethnicity other than “White—Non Hispanic” (Nevada Department of Education [NDE], 2011). Northern Nevada is currently undergoing a rapid shift in its demographic populations. Consider that during the 25 school years between 1984-85 and 2009-10, total minority population grew from 14.5% to 46.9%, an increase of over 320% (WCSD, 2011). Hispanics represent, by far, the largest minority group at nearly 37%; the second largest group is Asian/Pacific Islanders at nearly 5%. Because the five elementary school sites draw students from across the entire district (i.e., beyond typical school zone boundaries), demographic data from the specific schools housing WCSD’s SIPs are not necessarily representative of those students attending these classrooms. Therefore, the district-wide demographic data presented are considered the most representative of this population.

Overall, 44% of students in the WCSD are considered low SES for the purpose of eligibility for free- or reduced-lunch (NDE, 2011). Additionally, this district experiences a high rate of student transiency (nearly 31%), or movement among schools. Average daily attendance for this district is high, at approximately 19 out of 20 students enrolled. A relatively large portion of students—nearly one-fifth—are considered English language learners with English as a non-native language (NDE, 2011). Finally, about 13% of students grades K-12 have an Individualized Education Program (IEP). However, while district demographics provide a useful overview of the WCSD, it should be noted that the demographics of those students attending classrooms implementing the CSSS framework are expected to vary somewhat from this. For
example, 100% of these students receive special education services compared with 13% of students district-wide. Furthermore, the proportion of males to females in SIPs is high compared to the general population. Males with EBD typically outnumber female counterparts in a three-to-one ratio (van Bokhoven, Matthys, van Goozen, et al., 2005; Lewis, 1988; Petitclerc & Tremblay, 2009; Rutter, 2003). Despite these differences, having accurate demographic data available may be helpful to those examining this study’s findings. Specifically, a better understanding of this district’s student characteristics is likely to help researchers and others to better evaluate the generalizability of this study’s conclusions.

Table I

<table>
<thead>
<tr>
<th>WCSD Student Demographic Data, 2010-2011 School Year</th>
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<tbody>
<tr>
<td>All Grades</td>
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<tr>
<td>Category</td>
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<tr>
<td>Total Student Enrollment</td>
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<tr>
<td>Elementary School Grade Students</td>
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<tr>
<td>Middle School Grade Students</td>
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<tr>
<td>High School Grade Students</td>
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<tr>
<td>Total Minorities</td>
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<tr>
<td>American Indian/Alaska Native</td>
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<td>Asian/Pacific Islander</td>
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<td>Hispanic</td>
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<tr>
<td>Black—Not Hispanic</td>
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<tr>
<td>White—Not Hispanic</td>
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<td>Multi-race</td>
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<tr>
<td>Male</td>
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<tr>
<td>Female</td>
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<tr>
<td>Special Education (IEP)</td>
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<td>Limited English Proficiency (LEP)</td>
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<tr>
<td>Free/Reduced Lunch (FRL)</td>
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<tr>
<td>Transiency</td>
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<tr>
<td>Average Daily Attendance</td>
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*Approximate figures—may not sum to 100%
**Measures**

Three instruments were used to measure differences across time in the dependent variables (DV). The first instrument was the students’ daily behavioral point sheet, which is central to the Behavior Support Framework used within the CSSS system. This instrument has been developed and revised by professionals working within the WCSD over the course of the past 15 years. It has been under particular scrutiny over the last decade. Beginning approximately 11 years ago, a multidisciplinary research team of professionals was assembled for the purpose of better serving the needs of the elementary EBD population (Sexton, 2010). Over time, this team has included and collaborated with school psychologists, special and general education teachers, guidance counselors, University of Nevada, Reno (UNR) School of Medicine (UNSOM) child/adolescent psychiatrists and fellows, behavior analysts and UNR graduate students studying behavior analysis (Sexton, 2010). The Behavior Support Framework has benefitted from the collective efforts of these individuals; the daily point sheet used in the WCSD's SIP classrooms represents a culmination of much of their effort. This instrument works in tandem with a token economy and is structured to provide students with incentives to master and demonstrate appropriate school behavior. Incentives for desired student behaviors are delivered across varying intervals and ratios. Both immediate and delayed forms of reinforcement are used. Students may earn points among any of 13 categories of desired (or pro-social) behaviors. Response costs are also documented and enforced through the daily point sheet when students commit undesired (or disruptive) behaviors. Students may lose points as a result of committing any of the undesired (or disruptive) behaviors. Due to the unavailability of data for desired behaviors, data analyses will only be conducted with data on disruptive behaviors.
The Behavior Support Framework’s daily point sheet is considered by those experts working on the WCSD CSSS research team to be valid for the purposes for which it is intended. In terms of face validity, the instrument has been modified continually up to its present form in order to appear age-appropriate and friendly to students as well as to be relatively easy to understand. Elementary aged students have consistently demonstrated an ability to quickly and accurately understand the rules and procedures relating to the daily point sheet. To the outside observer, the purpose of the point sheet is almost immediately clear (see Appendix A). In fact, many of the students enrolled in these programs have been able to explain the "ins and outs" of their point sheet and other details of the Behavior Support Framework (known to them simply as “the program”), to adults visiting their classrooms.

Regarding content validity, the instrument in its present form is considered by the CSSS system’s team of experts to reasonably assess a broad spectrum of socially, emotionally, and academically pertinent behaviors as they occur in school settings and contexts. This statement may not be made about student functioning in home or community settings where social and behavioral norms may vary widely. Nevertheless, the daily point sheet has been shown to be a valuable tool for educators in multidisciplinary teams to make informed educational decisions regarding student placement and programming. Hours of collaboration among highly-qualified experts have been devoted to discussing the precise behaviors which are most crucial to success at school. Additionally, work has been done to finely hone the operational definitions of these behaviors (e.g., "how many inches does the child's bottom have to rise out of a seat before the child is considered to be ‘‘Out of Seat?’" or "how many seconds must elapse between two separate utterances before one incident of Verbal Aggression behavior is considered as two separate occurrences?"). These efforts have strengthened the construct validity of the instrument
as well. That is, program policies laid out in the Behavior Support Framework’s program manual have been revisited and edited time and again to ensure that the daily point sheet reasonably measures those behaviors it presumes to measure.

The discriminant validity of the daily point sheet is considered strong. This is because of the mutually exclusive nature or incompatibility of desired and undesired behaviors. For example, if a student is considered to be displaying On Task behavior according to program manual specifications, it is impossible that this same student is also displaying any disruptive behavior (e.g., Blurt, Off-Task, Property Destruction, etc.). Conversely, if a student is demonstrating, for example, Verbal Aggression behavior, he cannot be considered to be exhibiting any of the desired behaviors. Therefore, while there is overlap among certain prosocial behaviors and overlap among certain disruptive behaviors, there is theoretically no overlap between the former and the latter.

Finally, no work regarding the criterion-related validity of the daily point sheet has been conducted. This may be a worthwhile endeavor for future research due to a potential extant relationship between students’ scores on their daily point sheets and other outcomes, for example, suspensions, expulsions, or involvement with the juvenile justice system.

The second and third instruments used in this study were the Measures of Academic Progress (MAP) tests for Mathematics and Reading, respectively. The MAPs assessments present students with problems of varying difficulty depending both on each student’s grade level and performance on the test items. The test adapts dynamically, presenting less or more difficult items depending on students’ performance. Test scores are useful for providing a benchmark or “snapshot” of each student’s performance at the time of administration as well as helping to define individuals’ instructional levels in Mathematics and Reading content. These
assessments serve an important role in the school district's assessment program as these scores are used to provide evidence of student growth for the purpose of satisfying state accountability standards (Washoe County School District, 2011). Both the Mathematics and Reading MAPs tests are given three times each school year (once each during the Fall, Winter, and Spring seasons) "to inform instruction, encourage learning, and enhance student achievement" (WCSD, 2011, p. 1). They are intended to be useful to teachers as tools to measure their students' performance against a normed peer population. Both the Mathematics and Reading MAPs tests are administered to students in grades three through six in elementary schools across WCSD.

The assessment instruments are composed of multiple-choice items aligned to NV state standards. Because these assessment tools have been designed specifically to measure student attainment of the breadth of grade-appropriate state educational standards, they are considered by the WCSD to have adequate content validity (WCSD, 2011). The MAPs assessments also appear to have reasonable face validity. That is, both the multiple-choice and written/constructed response items appear to target specific skill areas relevant to Nevada's educational content standards. The MAPs assessment in Reading measures student responses across the areas of: Word Analysis (Nevada Content Standard [NCS] 1.0), Literary Text (NCS 3.0), and Informational Text (NCS 4.0) in addition to the literary elements of: Inference, Theme, Prediction, Figurative Language, Tone/Mood, and Constructed Response. The MAPs assessment in Mathematics measures student responses across the areas of: Numbers, Number Sense, and Computation (NCS 1.0); Patterns, Functions, and Algebra (NCS 2.0); Measurement (NCS 3.0); Spatial Relationships, Geometry, and Logic (NCS 4.0); and Data Analysis (NCS 5.0) (WCSD, 2011).
MAPs assessments in both areas are scored automatically by the computer and results are uploaded to a website which compiles this data for the WCSD. Because these tests have been normed on a national school-based population by the Northwest Evaluation Association, percentile ranks, grade equivalency scores, and standard scores are available in the interpretation of test scores. In this way, professionals viewing the results are able to gain a wider perspective of how individual students are performing. In addition to those instruments used to identify differences in the DVs of interest, more specific student demographic data was collected from each site. Through a questionnaire, the “2011-2012 Student Information Worksheet” (see Appendix C) the gender, age, grade, ethnicity, and special education eligibility category of students enrolled was collected. The questionnaire also contains questions relating to when students enrolled in their respective SIP, if they exited the program during the year, and, if so, for what reason. All student information collected is anonymous; no names, social security numbers, or student ID numbers were noted. Instead of asking for students’ date of birth, only the season and year was collected; this measure ensured that student information was not personally identifiable. A second questionnaire, the “2011-2012 Site Information Worksheet” contains questions relating to the SIP and the school in which it is housed. These questions include items about the extent to which the school was currently using Positive Behavior Supports, about staffing, the experience of those special education teachers and teaching assistants working in the program, and the average number of students enrolled in the program at any given time during the school year (pertinent due to the transient nature of the program).

Description of Variables

The independent variable in this study is enrollment in SIP classrooms implementing the CSSS system for at least the majority of the 2011-2012 school year. "Majority," in this case is
defined as having data for two out of the three Mathematics and Reading MAP assessments and program point sheet data for 3 out of the 4 quarters of the 2011-2012 school year.

One DV for this study relates to the mean number of points students accrued on their point sheets during the 2011-2012 school year for the desired behavior of Work Completion (WC). The possible scores for this DV range from 0% to 100% and are calculated in both weekly and quarterly averages for students at each site as well as for the program as a whole. A second DV is the mean percentage of students earning Excellent (“E”) Days per week and quarter for students at each site as well as the program as a whole. The possible scores for this DV range from 0% to 100%. Staff members are trained to accurately and reliably rate students on these variables on their point sheets according to pre-set criteria. Data for student desired behaviors such as On Task and Manners was not available from school sites and therefore is not included in this program evaluation.

Opposite the number of E Days earned by students, another DV in this study measures the number of Unsatisfactory (“U”) Days accrued by students. As with E Days, the possible scores for this DV range from 0% to 100% and is calculated in both weekly and quarterly averages for students at each site as well as for the program as a whole. The other DVs for this study for which data was collected from daily point sheets relates to the five categories of disruptive student behavior: Blurting (BL), Out of Seat (OS), Verbal Aggression (VA), Physical Aggression (PA), Property Destruction (PD). There is not a specific upper limit to the maximum incidents of response costs that can be accrued. Students could theoretically accrue any number of undesired behaviors. Therefore, the scores for these DVs can only be said to range from zero to greater than zero. This feature is important to allow progress to be evidenced where it would otherwise be missed. For example, if undesired behaviors were only to be documented for a
maximum of 20 incidences, no evidence of progress would be documented for a student who decreased his daily Blurting behaviors from 40 per day to 20 (a 50% reduction).

The next two DVs for this study are Mathematics and Reading MAP assessment scores. These provided information about the degree to which students mastered content standards for the core academic curriculum in grades 1-6. A standard score is collected for each test. Scores for the Reading MAP test range from approximately 146 (Fall administration Kindergarten score) to 229 (Spring administration eleventh grade score). Scores for the Math MAP test range from approximately 148 (Fall administration Kindergarten score) to 241 (Spring administration eleventh grade score). Mean standard scores for each test were calculated for students at each site as well as for the program as a whole. Differences in mean standard scores in each MAP test across the Fall, Winter, and Spring administrations will be calculated. The final DV, referred to as Combined MAP score, is the mathematical mean for each site’s Math and Reading MAP test score results. The Combined MAP score DV weights the means for the Reading and Math MAP test scores according to the number of data points available.

Data Collection Procedures

In order to ensure the anonymity of students’ data, school personnel were asked to remove the names and any other personally identifiable information from student point sheet and benchmark assessment data whether in paper or electronic format. Appendices C and E include data gathering worksheets which were provided to schools both on paper and electronically. Appendix B contains a memo sent to schools to summarize the purpose of the study, what is needed, as well as potential benefits to the school. Furthermore, no school names were reported in this study as further assurance of anonymity. The researcher contacted school principals first to obtain permission to conduct research with their schools. In most cases, these administrators
then delegated to one of their staff members to help gather needed information. The data requested included all information collected from elementary SIP point sheets and the Fall, Winter, and Spring Mathematics and Reading MAP test scores for all students enrolled in SIPs (all of which are implementing the CSSS system during the 2011-2012 school year). Both forms of data were available at individual school sites. After all study data are made anonymous by WCSD personnel, they were transferred to the researcher either in hard copy or electronically (either by portable storage device or as e-mail attachments).

Data Analysis Procedures

Justification of Parametric Statistics

Parametric statistics were used to analyze the data from students’ Reading and Math MAP test scores (as well as their calculated Combined MAP scores). A simple one-way ANOVA was used in comparing means across the Fall, Winter, and Spring trimester administrations for each site as well as for the program as a whole. The assumption of independent observations was met as each testing administration involved a partially different group of students due not only to the transient nature of SIP classrooms but also to inconsistent attendance by many of those students enrolled. For this same reason, the repeated measures ANOVA cannot be used. The assumption of homoscedasticity was tested for each set of data using Levene’s test for homogeneity of variance. No significant results were found for any DVs. The third assumption for the ANOVA test is that scores are expected to vary normally. For this study, it was expected that this assumption would be breached. In fact, from what is known about youths with EBD, there is little reason to expect that their performance on academic measures would fall into a normal distribution. As a result of their highly variable ability, academic performance data is rarely normally distributed. In fact, according to Trout, Nordness, Pierce et
al. (2003), virtually none of these children can be expected to perform above while as many as 91% perform below grade level. The academic performance of this population, therefore, exhibits a considerable positive skew. Fortunately, the ANOVA test is robust against violations of this assumption; therefore it nevertheless was selected for use with these data despite the presence of positive skew in MAP test scores (Erceg-Hurn & Mirosevich, 2008).

**Justification of Non-Parametric Statistics**

Non-parametric statistics were used to analyze the data from the student point sheets. Specifically, the Kruskal-Wallis H test was used. Many of the behaviors documented by SIP staff onto student point sheets are done so in a manner such that these data should not be considered interval level in some important respects. This is due to the way behaviors are operationally defined by the Behavior Support Framework's program manual, *Social Intervention Program: 2010-2011*. Such definitions make it possible for behaviors of differing duration and intensity to be documented identically. Blurting and Verbal Aggression are two behaviors for which this point can be made clearly. In both cases, a student is considered as displaying only a single occurrence of these behaviors until "the student stops [blurting/verbally aggressing] for five seconds" (Silva & Sexton, 2010, p. 24). If, after this five second break, the student resumes Blurting or Verbal Aggression behavior, "then this is considered another occurrence" (Silva & Sexton, 2010, p. 24). Therefore, a student who addresses another person with verbally aggressive behavior continuously for 60 seconds before ceasing would be counted as demonstrating a single instance of Verbal Aggression. Another student (or the same student at another time) who makes three separate vulgar remarks which last two seconds each would be documented as demonstrating three occurrences of Verbal Aggression even though the former incident had a duration of 10 times longer (60 vs. 6 seconds). Similarly, Out of Seat is defined as any period of
up to one minute during which a child's bottom is out of the chair. Thus one child raising his bottom seven inches out of his seat for five seconds and another child who stands atop his desk for 50 seconds would each be documented in the same fashion despite important differences in both duration and intensity of the respective behavior. Many other similar examples could be contrived from the operational definitions of other behaviors and illustrate that a certain lack of precision is characteristic of the documentation practices as specified by the program manual. These limitations are not intended to be a criticism of the program; rather, they illustrate why more conservative statistical measures (i.e., non-parametric analyses) are more appropriate for analysis of point sheet data. Furthermore, conclusions about behavior-related DVs must be drawn cautiously. Rather than stating, for example, that "students exhibited less Blurting behavior in the 3rd quarter than in the 1st," the language used in such a conclusion should be more precise. In this example, a more appropriate conclusion would be "students had fewer documented instances of Blurting behavior in the 3rd quarter than in the 1st." The latter phrasing does not assume that documentation matches exactly with actual occurrence (including duration and intensity) of a behavior.

Statistical Design

Table II describes the ways in which this study attempted to answer questions about the DVs. Of interest in this program evaluation is the extent to which the CSSS system effected positive differences in these areas both at individual school sites as well as to the program as a whole (across all SIP sites combined). Evaluation of those DVs representing undesired behaviors is particularly valuable for three main reasons. First, undesired behaviors are mutually exclusive from positive ones. According to the program manual, students cannot simultaneously display desired and undesired behaviors. Secondly, the presence of undesired behaviors is the single largest reason that students in SIPS are removed from the general education environment. The
same argument cannot be made for the converse of this statement. That is, the absence of desired behaviors does not create the same need to remove students from typical classrooms. For example, it may be decided that one student displaying Verbal Aggressions and Physical Aggressions needs placement in an SIP where this would not necessarily be concluded for another student who merely fails to demonstrate Manners and Ignoring behaviors. Furthermore, it is not the failure to show growth on Mathematics or Reading assessments that leads to student placement in self-contained special education classrooms. Such students could have their needs met through modifications or accommodations in the general education setting and curriculum or through time spent in a resource class to target and remediate skill deficits. Thirdly, the documentation of undesired behaviors as students change levels through the CSSS program remains more consistent than the documentation of desired behaviors. This is because as students progress through the program’s leveled system, better behavior is expected from them and, as a result, they tend to be positively reinforced less frequently. CSSS program staff members are trained to watch for those pro-social behaviors they are supposed to reinforce for the purpose of shaping. However, as students progressively master these desired behaviors, it becomes less necessary to reinforce each instance. This leads to a flattening phenomenon in the documentation of desired behaviors. For example, a well-behaved student who exhibits five times as many pro-social behaviors as a peer with more challenges may only be reinforced three times as frequently. This is a likely explanation for why data relating to desired student behavior was not transferred from student point sheets at some SIP sites. Additionally, had these data been available for this study, they might have been excluded from analysis on the basis of the aforementioned flattening phenomenon.
Table II

Analysis of CSSS Student Performance Measures by Location

<table>
<thead>
<tr>
<th>Measure</th>
<th>Individual site</th>
<th>Whole program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior data, by individual category</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Behavior data behaviors, aggregated*</td>
<td>Yes</td>
<td>Yes**</td>
</tr>
<tr>
<td>Reading MAP test scores</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Math MAP test scores</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Combined MAP test scores</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Aggregated point sheet data excludes the categories of E Days, U Days, and Work Completion due to the fact that these DVs are already products of the other student behaviors documented by the daily point sheets. The remaining behaviors aggregated are all disruptive student behaviors.

**As Work Completion scores only exist for one SIP site, this data set could not be evaluated for the whole program.

Research questions from this study were answered primarily through the Kruskal-Wallis H and ANOVA tests combined with a post-hoc analysis of respective data looking for clinically significant differences. The Kruskal-Wallis H test, a non-parametric analysis of variance by ranks is a non-parametric test appropriate for measuring differences in the means of independent data sets. It serves as a non-parametric analog to the ANOVA test. The Kruskal-Wallis H test will demonstrate how the frequency of undesired behaviors, E Days, U Days, and Work Completion varies across the four quarters of the 2011-2012 school year. The Kruskal-Wallis H test determines whether or not significant differences occur in the mean of data sets but does not indicate the directionality of the difference. Therefore, a visual post-hoc analysis using bar graphs will be presented so that directionality can be noted. All analyses relating to point sheet data take into account differences in the number of school days for each of the four quarters of the 2011-2012 school year. The ANOVA test demonstrated where differences were found in first through sixth grade students' Math, Reading, and Combined MAPs scores across the Fall, Winter, and Spring trimester administrations of the 2011-2012 school year.
In addition to statistical methods, an analysis of behavioral data investigating the presence of \textit{clinically} significant difference was included. There were two criteria for determining whether differences in student disruptive behaviors were clinically significant. The first was that the mean incidence of a disruptive behavior must be less for the second semester (aggregating the third and fourth quarters) than for the first (aggregating the first and second quarters). The second criteria for determining clinical significance is as follows: an undesired difference of at least 25\% of a given undesired behavior must be present when comparing the end of the year data (fourth quarter) to baseline figures (first quarter). Although the reasoning behind this criteria is subjective, it is based on the following two points of logic: a) Assuming the estimated annual per student program cost of $25,000, a desired difference of 25\% of the baseline presence of disruptive behaviors means that all such behaviors should be eliminated after the substantial investment of $100,000; b) Given the observation that problem behaviors become more difficult to remove the longer they remain, four years serves as a reasonable outer bound for the length of time a program should be given to correct such behavioral patterns. Any longer than this means that the vast majority of these elementary-aged students will be in middle and high schools and likely with far worse prognoses. Specifically, approximately 54\% of the students in WCSD SIP classrooms were documented as ranging in age from 10 to 13 at the outset of the 2011-2012 school year. Within four years from this point, more than half of these students will be at high school age (14-17). Clinically significant differences for the other behavioral categories—E Days, U Days, Work Completion—were not evaluated based on this criteria. These are not disruptive behavioral categories and because they are subject to ceiling and floor effects (with baseline amounts either being quite high or quite low) and must be
evaluated differently. Differences will be considered clinically significant the fourth quarter is different by 15% from the first quarter.

In analyzing Math MAP test score data, the criteria for clinical significance were as follows: if students’ Math MAP test scores differed at the rate of five standard score points per administration (e.g. Fall to Winter or Winter to Spring), the difference was considered clinically significant. This is because this is the average rate of growth (rounded to the nearest whole number) for the general population of students in grades one through six in the WCSD. In analyzing Reading MAP test score data, the criteria were as follows: if students’ Reading MAP test scores differed at the rate of three standard score points per administration, the difference was considered clinically significant. This is because this is the average rate of growth (rounded to the nearest whole number) for the general population of students in grades two through six in the WCSD. In analyzing Combined MAP test score data, the criteria was four standard score points per administration.

The tables below summarize how both statistical analysis and analysis for clinical significance were applied across data sets. Table III summarizes all the types of data for which both the Kruskal-Wallis test and clinical significance analysis was applied. Table IV summarizes the individual data categories analyzed as well as the aggregated categories analyzed for each site individually as well as for the program as a whole. Table V summarizes the time intervals used to display these same types of data. Finally, Tables VI and VII summarize which data were collected and analyzed. Following Table VII is a comprehensive list of research questions which were answered through this study through parametric, non-parametric, and clinical forms of analyses.
Table III

Data Analysis Procedure by Category of CSSS Student Performance Measure

<table>
<thead>
<tr>
<th>Measure</th>
<th>Kruskal-Wallis test</th>
<th>Clinical significance analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavior data, by individual site</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Behavior data, all sites combined</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Behavior data, by individual category</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Behavior data behaviors, all categories aggregated*</td>
<td>Yes</td>
<td>Yes**</td>
</tr>
<tr>
<td>Reading MAP test scores</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Math MAP test scores</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Combined MAP test scores</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Aggregated point sheet data excludes the categories of E Days, U Days, and Work Completion because these DVs are already products of the other student behaviors documented by the daily point sheets. The remaining behaviors aggregated are all disruptive student behaviors.

Table IV

Behavioral* and MAP Test Score Data Analysis by Type and Location

<table>
<thead>
<tr>
<th>Type</th>
<th>Location</th>
<th>Aggregate</th>
<th>Individual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Site</td>
<td>Individual</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Whole Program</td>
<td>Individual</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Where data is available

Table V

Student Data Analysis by Time Interval

<table>
<thead>
<tr>
<th>Measure</th>
<th>Time Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disruptive Behavior (aggregate and individual)</td>
<td>Week</td>
</tr>
<tr>
<td>MAPs Scores (1st-6th grade)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

*Fall, Winter, and Spring trimester administrations

Table VI

Behavioral Data Available for Analysis by Site

<table>
<thead>
<tr>
<th>Site</th>
<th>E Days</th>
<th>U Days</th>
<th>WC</th>
<th>BL</th>
<th>OS</th>
<th>OT</th>
<th>PD</th>
<th>VA</th>
<th>PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site A</td>
<td>Yes</td>
<td>Yes</td>
<td>--</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Site B</td>
<td>Yes</td>
<td>Yes</td>
<td>--</td>
<td>Yes</td>
<td>Yes</td>
<td>--</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Site C</td>
<td>Yes</td>
<td>Yes</td>
<td>--</td>
<td>Yes</td>
<td>Yes</td>
<td>--</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Site D</td>
<td>Yes</td>
<td>Yes</td>
<td>--</td>
<td>Yes</td>
<td>Yes</td>
<td>--</td>
<td>Yes</td>
<td>--</td>
<td>Yes</td>
</tr>
<tr>
<td>Site E</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Combined*</td>
<td>Yes</td>
<td>Yes</td>
<td>--</td>
<td>--</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*An aggregate of the data across those sites for which data is available
Table VII

MAP Assessment Score Data Available for Analysis by Site

<table>
<thead>
<tr>
<th></th>
<th>Math MAP Score</th>
<th>Reading MAP Score</th>
<th>Combined MAP Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site A</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Site B</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Site C</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Site D</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Site E</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Combined</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Research Questions

In addition to the two main research questions listed in Chapter One, this study answers several sub questions regarding relevant DVs. Sub questions one through forty-two pertain to research question one; sub questions forty-three through sixty pertain to research question two. The main research questions and sub-questions are as follows:

Main Research Questions

1. Is there a desired difference in undesired behaviors demonstrated by students?

2. Is there a desired difference in student academic performance?

Sub-questions

1. Is there a desired difference in the proportion of “E days” earned by students at site A?

2. Is there a desired difference in the proportion of “E days” earned by students at site B?

3. Is there a desired difference in the proportion of “E days” earned by students at site C?

4. Is there a desired difference in the proportion of “E days” earned by students at site D?

5. Is there a desired difference in the proportion of “E days” earned across all sites?

6. Is there a desired difference in the proportion of “U days” earned by students at site A?

7. Is there a desired difference in the proportion of “U days” earned by students at site B?

8. Is there a desired difference in the proportion of “U days” earned by students at site C?

9. Is there a desired difference in the proportion of “U days” earned at site D?
10. Is there a desired difference in the proportion of “U days” earned across all sites?
11. Is there a desired difference in “Blurting” behavior for students at site A?
12. Is there a desired difference in “Blurting” behavior for students at site B?
13. Is there a desired difference in “Blurting” behavior for students at site C?
14. Is there a desired difference in “Blurting” behavior for students across all sites?
15. Is there a desired difference in “Work Completion” earned by students at site D?
16. Is there a desired difference in “Out of Seat” behavior for students at site A?
17. Is there a desired difference in “Out of Seat” behavior for students at site B?
18. Is there a desired difference in “Out of Seat” behavior for students at site C?
19. Is there a desired difference in “Out of Seat” behavior for students at site D?
20. Is there a desired difference in “Out of Seat” behavior for students across all sites?
21. Is there a desired difference in “Off-Task” behavior for students at Site A?
22. Is there a desired difference in “Off-Task” behavior for students at Site C?
23. Is there a desired difference in “Off-Task” behavior for students across all sites?
24. Is there a desired difference in “Property Destruction” behavior for students at Site A?
25. Is there a desired difference in “Property Destruction” behavior for students at Site B?
26. Is there a desired difference in “Property Destruction” behavior for students at Site C?
27. Is there a desired difference in “Property Destruction” behavior across all sites?
28. Is there a desired difference in “Verbal Aggression” behavior for students at Site A?
29. Is there a desired difference in “Verbal Aggression” behavior for students at Site B?
30. Is there a desired difference in “Verbal Aggression” behavior for students at Site C?
31. Is there a desired difference in “Verbal Aggression” behavior for students at Site D?
32. Is there a desired difference in “Verbal Aggression” behavior across all sites?
33. Is there a desired difference in “Physical Aggression” behavior for students at Site A?
34. Is there a desired difference in “Physical Aggression” behavior for students at Site A?
35. Is there a desired difference in “Physical Aggression” behavior for students at Site C?
36. Is there a desired difference in “Physical Aggression” behavior for students at Site D?
37. Is there a desired difference in “Physical Aggression” behavior across all sites?
38. Is there a desired difference in mean disruptive behaviors for students at Site A?
39. Is there a desired difference in mean disruptive behaviors for students at Site B?
40. Is there a desired difference in mean disruptive behaviors for students at Site C?
41. Is there a desired difference in mean disruptive behaviors for students at Site D?
42. Is there a desired difference in mean disruptive behaviors across all sites?
43. Is there a desired difference in Math MAP test scores at Site A?
44. Is there a desired difference in Math MAP test scores at Site B?
45. Is there a desired difference in Math MAP test scores at Site C?
46. Is there a desired difference in Math MAP test scores at Site D?
47. Is there a desired difference in Math MAP test scores at Site E?
48. Is there a desired difference in Math MAP test scores across all sites?
49. Is there a desired difference in Reading MAP test scores at Site A?
50. Is there a desired difference in Reading MAP test scores at Site B?
51. Is there a desired difference in Reading MAP test scores at Site C?
52. Is there a desired difference in Reading MAP test scores at Site D?
53. Is there a desired difference in Reading MAP test scores at Site E?
54. Is there a desired difference in Reading MAP test scores across all sites?
55. Is there a desired difference in Combined MAP test scores at Site A?
56. Is there a desired difference in Combined MAP test scores at Site B?

57. Is there a desired difference in Combined MAP test scores at Site C?

58. Is there a desired difference in Combined MAP test scores at Site D?

59. Is there a desired difference in Combined MAP test scores at Site E?

60. Is there a desired difference in Combined MAP test scores across all sites?
CHAPTER IV: RESULTS

Introduction

The purpose of this study was to answer two main research questions relating to Social Intervention Programs (SIPs) in the Washoe County School District (WCSD) implementing the Comprehensive Student and Staff Support (CSSS) system with elementary grade (K-6) students. Specifically, the two main research questions being answered in this study are as follows:

1. Is there a desired difference in undesired behaviors demonstrated by students?
2. Is there a desired difference in student academic performance?

In answering these questions, three approaches were used: a parametric statistical test (ANOVA), a non-parametric statistical analysis (Kruskal-Wallis H test), and an analysis of the data looking for trends which appear to be clinically significant based on pre-specified criteria.

Demographic Information

Information regarding student demographics was collected via the 2011-2012 Student Information Worksheet and is included in Appendix C. Information pertaining to both staff demographics and general program information was collected via the 2011-2012 Site Information Worksheet and is also included in Appendix C. Both questionnaires were returned by all five sites. One hundred percent of the requested information was obtained from all sites on both surveys after a six month process of rigorously pursuing data collection. The results from both of these questionnaires are summarized in Tables VIII and IX below. Additionally, pie charts illustrating these data visually are included in Appendix D.
### Table VIII

**CSSS Program Student Demographics Summary**

<table>
<thead>
<tr>
<th>Student Gender Information</th>
<th>Data Collected % (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>82.22 (111)</td>
</tr>
<tr>
<td>Female</td>
<td>17.78 (24)</td>
</tr>
<tr>
<td>Total Sample Size</td>
<td>100.00 (135)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Age</th>
<th>Data Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 5</td>
<td>1.48 (2)</td>
</tr>
<tr>
<td>Age 6</td>
<td>2.22 (3)</td>
</tr>
<tr>
<td>Age 7</td>
<td>8.89 (12)</td>
</tr>
<tr>
<td>Age 8</td>
<td>13.33 (18)</td>
</tr>
<tr>
<td>Age 9</td>
<td>19.26 (26)</td>
</tr>
<tr>
<td>Age 10</td>
<td>21.48 (29)</td>
</tr>
<tr>
<td>Age 11</td>
<td>17.04 (23)</td>
</tr>
<tr>
<td>Age 12</td>
<td>11.85 (16)</td>
</tr>
<tr>
<td>Age 13</td>
<td>3.70 (5)</td>
</tr>
<tr>
<td>Mean Age</td>
<td>9.63 years (SD = 1.76) (135)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Grade</th>
<th>Data Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten</td>
<td>.74 (1)</td>
</tr>
<tr>
<td>Grade 1</td>
<td>5.93 (8)</td>
</tr>
<tr>
<td>Grade 2</td>
<td>9.62 (13)</td>
</tr>
<tr>
<td>Grade 3</td>
<td>15.56 (21)</td>
</tr>
<tr>
<td>Grade 4</td>
<td>20.00 (27)</td>
</tr>
<tr>
<td>Grade 5</td>
<td>22.22 (30)</td>
</tr>
<tr>
<td>Grade 6</td>
<td>25.93 (35)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Race</th>
<th>Data Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian/Alaska Native</td>
<td>2.96 (4)</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>0.74 (1)</td>
</tr>
<tr>
<td>Black</td>
<td>6.67 (9)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>21.48 (29)</td>
</tr>
<tr>
<td>White</td>
<td>63.70 (86)</td>
</tr>
<tr>
<td>Multiracial</td>
<td>4.44 (6)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student Special Education Eligibility Category</th>
<th>Data Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autism</td>
<td>6.67 (9)</td>
</tr>
<tr>
<td>Emotional Disturbance</td>
<td>62.22 (84)</td>
</tr>
<tr>
<td>Health Impairment</td>
<td>22.22 (30)</td>
</tr>
<tr>
<td>Specific Learning Disability</td>
<td>7.41 (10)</td>
</tr>
<tr>
<td>Unknown</td>
<td>1.48 (2)</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Student Program Attendance</th>
<th>Data Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present during 2010-2011 school year</td>
<td>65.93 (89)</td>
</tr>
<tr>
<td>Not present during 2010-2011 school year</td>
<td>34.07 (46)</td>
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<thead>
<tr>
<th>Student Outcomes for 2012-2013 School Year</th>
<th>Data Collected</th>
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<td>Staying in program: Attending, 2012-2013 school year</td>
<td>59.26 (80)</td>
</tr>
<tr>
<td>Leaving/Left: Not attending program, 2012-2013 school year</td>
<td>40.74 (30)</td>
</tr>
<tr>
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<table>
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<th>Reasons for Leaving Program</th>
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<td>Leaving/Left: Moving/moved homes</td>
<td>5.19 (7)</td>
</tr>
<tr>
<td>Leaving/Left: Going to middle school</td>
<td>5.19 (7)</td>
</tr>
<tr>
<td>Leaving/Left: Completion of program/no longer eligible</td>
<td>10.37 (14)</td>
</tr>
<tr>
<td>Leaving/Left: Going to more restrictive placement</td>
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<tr>
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Table IX

**CSSS Program Staff Demographics Summary**

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<th>Site C</th>
<th>Site D</th>
<th>Site E</th>
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<th>Mean</th>
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* “Exp” refers to the number of years of experience working at their current SIP sites

Table IX lists differences in staffing between teachers, assistants, and aides staffing the CSSS SIPS. “Teacher” refers to licensed special education teachers who lead the instructional and case management duties of students in the programs. Teachers are contracted to work a minimum of 35 hours per week. “Assistants” refers to teaching assistants contracted to work 32.5 hours per week. The role of the teaching assistant is designed to support the classroom teacher with a number of roles related to classroom maintenance and instruction. Tasks include “planning, preparing, and developing various teaching aids,” “present[ing] subject matter to students” and assisting students with lessons by presenting or reinforcing concepts.” This is in addition to maintaining the physical classroom and assisting with student discipline (Washoe County School District [WCSD], 2012). “Aides” refers to classroom teaching aides contracted to work a maximum of 27.25 hours per week. The role of the aide can be described as more peripheral than that of the teaching assistant. Tasks included in the job description of the teaching aide, for example, include correcting papers, distributing materials to students, taking attendance, counting school lunch money, making photocopies, verifying that students out of class have hall passes, etc. (WCSD, 2012).
Descriptive Statistics

The number of data points, means, and standard deviations were calculated for the following sets of data: weekly mean proportion of students earning Excellent (E) Days and Unsatisfactory (U) Days for each site and all sites combined; the weekly mean Work Completion (WC) percentage (data available at Site D only); the weekly mean number of Blurt (BL), Out of Seat (OS), Off-Task (OT), Property Destruction (PD), Verbal Aggression (VA), and Physical Aggression (PA) behaviors for each site and all sites combined; and weekly mean disruptive behaviors for each site and all sites combined. All of these descriptive statistics are also reported below in Table X. Tables XI, XII, and XIII summarize descriptive and statistical information for the Math, Reading, and Combined MAP test score data, respectively, across all five sites and for all sites combined.

Table X

Behavioral Data: Descriptive and Kruskal-Wallis H Statistical Information

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<td>0.18</td>
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### Table XI

**Math MAP Assessment Descriptive and ANOVA Statistical Information**

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*An aggregate of the following categories where data is available: BL, OS, OT, PD, VA, and PA*
### Table XII

**Reading MAP Assessment Descriptive and ANOVA Statistical Information**

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*Due to small sample size, any conclusions regarding this trimester should be made with substantial caution.

---

### Table XIII

**Combined MAP Assessment Descriptive and ANOVA Statistical Information**

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</table>
Research Question One

Forty-two sub-questions were evaluated using the Kruskal-Wallis H test to evaluate quarterly data. An analysis was also conducted which examined quarterly data for clinically significant differences in DVs related to student behavior. The first criteria for determining clinical significance required that the mean incidence of a disruptive behavior must be less for the second semester (aggregating the third and fourth quarters) than for the first (aggregating the first and second quarters). The second criteria was that a desired difference of at least 25% of a given behavior must be present when comparing the end of the year data (fourth quarter) to baseline figures (first quarter). Table XIV below summarizes the DVs for which statistically significant differences were found (p < .05). Following Table XIV is a discussion naming the specific quarters of the 2011-2012 school year in which differences were found for behavioral DVs. Table XV summarizes where differences relating to the first forty-two sub-questions appeared to be clinically significant. Additionally, Appendix F visually displays the relevant DVs for sub-questions one through forty-two excluding those for which figures are provided in this chapter.
### Table XIV

**Kruskal-Wallis H Test Results for Sub-questions One through Forty-Two**

<table>
<thead>
<tr>
<th></th>
<th>Site A</th>
<th>Site B</th>
<th>Site C</th>
<th>Site D</th>
<th>All Sites</th>
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</thead>
<tbody>
<tr>
<td><strong>Weekly Mean Proportion E Days</strong></td>
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<td>**</td>
</tr>
<tr>
<td><strong>Weekly Mean Proportion U Days</strong></td>
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<td>**</td>
<td>**</td>
</tr>
<tr>
<td><strong>Weekly Mean WC</strong></td>
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<td><strong>Weekly Mean BL</strong></td>
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</tr>
<tr>
<td><strong>Weekly Mean OS</strong></td>
<td>--</td>
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<td>*</td>
<td>*</td>
</tr>
<tr>
<td><strong>Weekly Mean OT</strong></td>
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<td>--</td>
</tr>
<tr>
<td><strong>Weekly Mean PD</strong></td>
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<td>**</td>
<td>--</td>
<td>No Data</td>
<td>--</td>
</tr>
<tr>
<td><strong>Weekly Mean VA</strong></td>
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<td>--</td>
<td>--</td>
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</tr>
<tr>
<td><strong>Weekly Mean PA</strong></td>
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</tr>
<tr>
<td><strong>Mean Disruptive Behaviors†</strong></td>
<td>**</td>
<td>--</td>
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<td>*</td>
<td>--</td>
</tr>
</tbody>
</table>

*A significant difference is present suggesting *decreasing* incidents of disruptive behavior  
**A significant difference is present suggesting *increasing* incidents of disruptive behavior  
-- No significant difference present  
† An aggregate of the following categories where data is available: BL, OS, OT, PD, VA, and PA

### Table XV

**Analysis for Clinical Significance for Sub-questions One through Forty-Two**

<table>
<thead>
<tr>
<th></th>
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<th>Site B</th>
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<th>All Sites</th>
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<tbody>
<tr>
<td><strong>Weekly Mean Proportion E Days</strong></td>
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<td>--</td>
</tr>
<tr>
<td><strong>Weekly Mean Proportion U Days</strong></td>
<td>--</td>
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<td>*</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td><strong>Weekly Mean WC</strong></td>
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<td>No Data</td>
<td>No Data</td>
<td>--</td>
<td>No Data</td>
</tr>
<tr>
<td><strong>Weekly Mean BL</strong></td>
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<td>*</td>
<td>--</td>
<td>No Data</td>
<td>--</td>
</tr>
<tr>
<td><strong>Weekly Mean OS</strong></td>
<td>--</td>
<td>*</td>
<td>--</td>
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<tr>
<td><strong>Weekly Mean OT</strong></td>
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<td>No Data</td>
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<td>No Data</td>
<td>**</td>
</tr>
<tr>
<td><strong>Weekly Mean PD</strong></td>
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<td>*</td>
<td>No Data</td>
<td>**</td>
</tr>
<tr>
<td><strong>Weekly Mean VA</strong></td>
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<td>**</td>
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<td>--</td>
</tr>
<tr>
<td><strong>Weekly Mean PA</strong></td>
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<td>*</td>
<td>*</td>
</tr>
<tr>
<td><strong>Mean Disruptive Behaviors†</strong></td>
<td>**</td>
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</tr>
</tbody>
</table>

*A significant difference is present suggesting *decreasing* incidents of disruptive behavior  
**A significant difference is present suggesting *increasing* incidents of disruptive behavior  
-- No significant difference present  
† An aggregate of the following categories where data is available: BL, OS, OT, PD, VA, and PA

Table XV shows significant clinical differences (suggesting a desired difference) in disruptive student behavior in 10 DVs (23.81%) while an undesired difference in disruptive behavior was suggested by differences in 12 DVs (28.57%). When all forms of disruptive student behavior were aggregated to a single DV, “Mean Disruptive Behaviors,” one site out of the four
exhibited an overall trend toward decreasing frequency of disruptive behaviors while two other
DV$s indicated movement toward increasing disruptive behavior. These findings suggest that
student behavior was worsening in more places than it was improving. This same finding was
corroborated by both the statistical results (from which four DV$s indicated student improvements
and eight DV$s indicated undesired differences in documentation of disruptive behavior) and
clinical results (from which 10 DV$s indicated student improvements and 12 DV$s indicated
undesired differences in documentation of disruptive behavior) as well. Table XVI below
summarizes where agreement occurred between the results of both statistical and clinical
analyses.

Table XVI

*Overlapping Analysis Results for Sub-questions One through Forty-Two*

<table>
<thead>
<tr>
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<td>**</td>
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<tr>
<td>Weekly Mean Proportion U Days</td>
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<td>**</td>
</tr>
<tr>
<td>Weekly Mean WC</td>
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<td>No Data</td>
<td>No Data</td>
<td>--</td>
<td>No Data</td>
</tr>
<tr>
<td>Weekly Mean BL</td>
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<tr>
<td>Weekly Mean OS</td>
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<tr>
<td>Weekly Mean OT</td>
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<tr>
<td>Weekly Mean PD</td>
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<tr>
<td>Weekly Mean VA</td>
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<tr>
<td>Weekly Mean PA</td>
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<tr>
<td>Mean Disruptive Behaviors†</td>
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</tr>
</tbody>
</table>

* A significant difference is present suggesting *decreasing* incidents of disruptive behavior
** A significant difference is present suggesting *increasing* incidents of disruptive behavior
-- No significant difference present
† An aggregate of the following categories where data is available: BL, OS, OT, PD, VA, and PA

Generally, the findings from the Kruskal-Wallis H test and analysis for clinical
significance were similar more often for DV$s whose results indicated increasing incidence of
disruptive student behavior. This was particularly the case for Blurt, Off Task, and Mean
Disruptive Behaviors for Site A. A significant amount of evidence exists when combining the
results from both forms of analyses suggesting that this site did not meet its targeted program
objectives. These goals, are a) "to help children acquire and develop effective, pro-social behaviors," b) "to support the children to make adequate academic progress," and c) "to extinguish behaviors that are impeding students’ ability to be successful in the regular classroom" (Silva & Sexton, 2010, p. 3).

As can be seen in Table XVI, differences suggesting desired differences in disruptive student behavior were found in two DVs out of 42 (4.76%) while differences suggesting undesired differences in disruptive behavior were suggested by differences in eight DVs (19.05%). When all forms of disruptive student behavior were aggregated to a single DV, Mean Disruptive Behaviors, Site A exhibited an overall trend toward undesired differences in the documented number of disruptive behaviors. Aggregating in a different direction (across sites vs. disruptive behaviors), the data set for all sites revealed an undesired difference in both the number of E Days and U Days.

Excellent Days

For the program as a whole, students were earning fewer Excellent (“E” for short) Days in both the third and fourth quarters than they were in the second. The largest difference was seen in comparing the second and third quarters. During this time, the rate of earning E Days differed undesirably about 14%. However, because there was no significant difference between the first and fourth quarters, conclusions about the overall trend for the school year should be drawn cautiously. Regarding significance for individual SIPs, Site C displayed an undesired difference in the number of E Days as well during the 2011-2012 school year. Specifically, fewer E Days were earned in the fourth quarter than either quarter of the first semester. Conversely, statistical analysis yielded significant results indicating an undesired difference for the program as a whole for the percentage of students earning U Days. Specifically, the Kruskal-Wallis H test
found the second, third, and fourth quarters to differ from the first quarter suggesting that student rates of E Day accrual held steady for the majority of the school year before finally declining in the final quarter.

Excellent Days Significance

Table XVII and Figures 4.1 and 4.2 below address sub-question five, “Is there a desired difference in the frequency of “E days” earned by students across all sites?” For information regarding the Excellent Day ratings at individual sites, see Appendix F: Figures F.1-F.8.

Table XVII

Excellent Day Significance—All Sites

<table>
<thead>
<tr>
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<th>Site A</th>
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<th>Site C</th>
<th>Site D</th>
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<td>Both</td>
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</tr>
</tbody>
</table>

*A significant difference is present suggesting decreasing incidents of disruptive behavior

** A significant difference is present suggesting increasing incidents of disruptive behavior

-- No significant difference present

Figures 4.1. and 4.2. Mean weekly/quarterly (respectively) proportion of students earning E when data is aggregated across all sites for which data is available.

Unsatisfactory Days

For the program as a whole, the incidence of students earning Unsatisfactory (“U” for short) Days appeared to differ undesirably throughout the school year. A visual post-hoc analysis
revealed that the percentage of students earning U Days rose up until the third quarter at which point it peaked at 18% (up from 13% in the first quarter). Regarding significance for individual SIPs, the number of U Days was found to differ undesirably specifically for Site D (as well). A post-hoc analysis found this number to be greater during the third and fourth quarters (30% and 37%, respectively) than in the first quarter (18%). This indicates that the mean percentage of students earning U Days doubled from the beginning of the year to the end.

Unsatisfactory Day Significance

Table XVIII and Figures 4.3 and 4.4 below address sub-question ten, “Is there a desired difference in the frequency of “U days” earned by students across all sites?” For information regarding the Unsatisfactory Day ratings at individual sites, see Appendix F: Figures F.9-F.16.

Table XVIII

*Unsatisfactory Day Significance—All Sites*

<table>
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</table>

*A significant difference is present suggesting decreasing incidents of disruptive behavior

** A significant difference is present suggesting increasing incidents of disruptive behavior

-- No significant difference present

*Figures 4.3. and 4.4. Mean weekly/quarterly (respectively) proportion of students earning U when data is aggregated across all sites for which data is available.*
Blurt Behavior

For the program as a whole, no significant difference was found in Blurt (BL) behavior between the first and fourth quarters. Regarding significance for individual SIPs, both Sites A and B displayed significant differences. Site A met statistical and clinical criteria for significance in undesired differences incidence of BL behavior. Specifically, the fourth quarter had more documented instances of this behavior than in any preceding quarter. A post-hoc comparison found the fourth quarter rate to be 30.43% greater than at baseline. At Site B, the incidence of BL behaviors visually appeared to differ desirably fairly and ended in the fourth quarter at about half the baseline amount (50.77%).

Blurt Behavior Significance

Table XIX and Figures 4.5 and 4.6 below address sub-question fourteen, “Is there a desired difference in “Blurting” behavior for students across all sites?” For information regarding the BL behavior at individual sites, see Appendix F: Figures F.17-F.22.

Table XIX

<table>
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<tr>
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</tr>
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*A significant difference is present suggesting decreasing incidents of disruptive behavior
** A significant difference is present suggesting increasing incidents of disruptive behavior
-- No significant difference present
Figures 4.5. and 4.6. Mean weekly/quarterly (respectively) number of BL behaviors aggregated across all sites for which data is available.

Work Completion

Data for student rates of Work Completion (WC) were only available for Site D. There were no statistically or clinically significant differences were found. It is plausible that a ceiling effect was in operation in this case. After all, the baseline rate of WC was 90%. It is therefore not surprising that students’ WC failed to differ significantly from 90%.

Work Completion Significance

Table XX and figures IV7 and IV8 below address sub-question ten, “Is there a desired difference in the percentage of “Work Completion” earned by students at Site D.

Table XX

<table>
<thead>
<tr>
<th></th>
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-- No significant difference present
Out of Seat Behavior

Of all categories of disruptive behavior, there is the most evidence that student Out of Seat (OS) behavior differed in a positive direction during the 2011-2012 school year. Statistical analysis displayed a significant difference in this behavior for the program as whole. The incidence of this disruptive behavior differed by 39.28% from the first quarter to the fourth quarter. Put differently, the fourth quarter amount was 60.72% of the baseline amount.

Regarding significance for individual SIPs, Sites B and D also evidenced desired differences in OS behavior. At Site B, the only significant difference for incidence of OS behavior was evidenced when comparing the third and fourth quarters. The trend at Site B was complicated by a visual trend in which OS appeared to differ undesirably into the second and third quarters before finally dropping off for the fourth quarter. Therefore, OS behavior at Site B failed to meet the first criterion for displaying a clinically significant difference. Namely, the mean of OS behavior was greater in the second semester than in the first. At Site D, the incidence of OS behavior differed desirably 57.00% from the first to the fourth quarter. Put differently, the fourth quarter amount of documented OS behavior was 43.00% of the baseline amount. A post-hoc comparison and visual analysis found both the first and third quarters to be less than the fourth
quarter. The difference in OS behavior at Site D was found to be both statistically and clinically significant.

Out of Seat Behavior Significance

Table XXI and figures IV9 and IV10 below address sub-question 20, “Is there a desired difference in the frequency of Out of Seat behavior earned by students across all sites?” For information regarding OS behavior at individual sites, see Appendix F: figures F23-F30.

Table XXI

<table>
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<th></th>
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</tbody>
</table>

*A significant difference is present suggesting decreasing incidents of disruptive behavior
** A significant difference is present suggesting increasing incidents of disruptive behavior
-- No significant difference present

Figures 4.9. and 4.10. Mean weekly/quarterly (respectively) number of OS behaviors aggregated across all sites for which data is available.

Off Task Behavior

The Kruskal-Wallis H test found no significant difference in students’ rate of Off Task (OT) behavior for the program as a whole. A clinical analysis did suggest an undesired difference in this behavior during the 2011-2012 school year. Specifically, in comparing the first
and fourth quarters, OT behavior rose 30.53%. Put differently, the fourth quarter amount was 130.53% of the baseline amount. Regarding significance for individual SIPs, both statistically and clinically significant undesired differences were found in OT behavior at Site A. Having differed 63.15% from the first to the fourth quarter, the fourth quarter amount was 163.15% that of baseline incidence of OT behavior.

Off Task Behavior Significance

Table XXII and figures IV11 and IV12 below address sub-question 23, “Is there a desired difference in “Off-Task” behavior for students across all sites For information regarding the OT behavior at individual sites, see Appendix F: figures F31-F34

Table XXII

*Off Task Significance—All Sites*

<table>
<thead>
<tr>
<th></th>
<th>Site A</th>
<th>Site B</th>
<th>Site C</th>
<th>Site D</th>
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<tr>
<td>Clinical</td>
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*A significant difference is present suggesting *decreasing* incidents of disruptive behavior

** A significant difference is present suggesting *increasing* incidents of disruptive behavior

-- No significant difference present

*Figures 4.11. and 4.12.* Mean weekly/quarterly (respectively) number of OT behaviors aggregated across all sites for which data is available.
Property Destruction

Statistical analysis found no significant difference in students’ rate of Property Destruction (PD) behavior for the program as a whole. The clinical analysis, however, revealed that this form of behavior differed undesirably during the school year. The number of PD behaviors were greatest during the third quarter but by fourth quarter still demonstrated an undesired difference of 53.85%. Put differently, the fourth quarter number of PD behaviors was 153.85% of the baseline amount. Regarding significance for individual SIPs, Sites B and C were found to demonstrate significant differences. At Site B, both forms of analyses found that an undesired difference occurred. The Kruskal-Wallis H test revealed that the third and fourth quarters differed significantly from the first and second quarters. The amount of PD behavior differed undesirably by 438.24% from the first to the fourth quarter; the fourth quarter amount was 538.24% of the baseline amount.

Property Destruction Significance

Table XXIII and figures IV13 and IV14 below address sub-question 27, “Is there a desired difference in “Property Destruction” behavior across all sites?” For information regarding PD behavior at individual sites, see Appendix F: figures F35-F40.
Table XXIII

*Property Destruction Significance—All Sites*

<table>
<thead>
<tr>
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<tr>
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<td>Both</td>
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<td>**</td>
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<td>No Data</td>
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</tr>
</tbody>
</table>

*A significant difference is present suggesting *decreasing* incidents of disruptive behavior

** A significant difference is present suggesting *increasing* incidents of disruptive behavior

-- No significant difference present

*Figures 4.13. and 4.14.* Mean weekly/quarterly (respectively) number of PD behaviors aggregated across all sites for which data is available.

**Verbal Aggression**

Neither form of analysis found significant differences in Verbal Aggression (VA) behavior for the program as a whole. Regarding significance for individual SIPs, clinical analysis (only) found significant differences at both Sites B and C. At Site B, the incident of VA behavior differed desirably by 26.76% throughout the school year ending at 73.23% in the fourth quarter. The opposite finding was revealed for Site C. At this location, the incidence of VA behavior differed undesirably by 376.36% throughout the year ending at 476.36% of the baseline amount.

**Verbal Aggression Significance**

Table XXIV and figures IV15 and IV16 below address sub-question 32, “Is there a desired difference in “Verbal Aggression” behavior across all sites?” For information regarding the Unsatisfactory Day ratings at individual sites, see Appendix F: figures F41-F48.
Table XXIV

*Verbal Aggression Significance—All Sites*

<table>
<thead>
<tr>
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</tbody>
</table>

*A significant difference is present suggesting decreasing incidents of disruptive behavior*

** A significant difference is present suggesting increasing incidents of disruptive behavior

-- No significant difference present

Figures 4.15 and 4.16. Mean weekly/quarterly (respectively) number of VA behaviors aggregated across all sites for which data is available.

**Physical Aggression**

The Kruskal-Wallis H test found that a desired difference in Physical Aggression (PA) behavior occurred for the program as a whole. The amount of this behavior differed by 27.89% throughout the school year and ended at only 72.11% of the baseline amount. The difference was not found to be clinically significant because the criterion requiring the mean amount of disruptive behavior be less in the second semester than in the first semester was not met.

Regarding significance for individual SIPs, a clinical analysis (only) found that the amount of PA behavior differed undesirably by Site A by 180% throughout the school year. In the fourth quarter, the documented incidence of PA behavior was 280% of the baseline amount.
Physical Aggression Significance

Table XXV and figures IV17 and IV18 below address sub-question 37, “Is there a desired difference in ‘Physical Aggression’ behavior across all sites?” For information regarding the PA behavior at individual sites, see Appendix F: figures F49-F56.

Table XXV

Physical Aggression Significance—All Sites

<table>
<thead>
<tr>
<th></th>
<th>Site A</th>
<th>Site B</th>
<th>Site C</th>
<th>Site D</th>
<th>All Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistical</td>
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<td>Clinical</td>
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</tbody>
</table>

*A significant difference is present suggesting decreasing incidents of disruptive behavior

** A significant difference is present suggesting increasing incidents of disruptive behavior

-- No significant difference present

Figures 4.17. and 4.18. Mean weekly/quarterly (respectively) number of PA behaviors aggregated across all sites for which data is available.

Mean Disruptive Behavior

Neither the Kruskal-Wallis H test nor the clinical analysis found any significant difference in students’ rate of Mean Disruptive Behavior for the program as a whole. Regarding significance for individual SIPs, the clinical analysis found significant differences at both Sites A and D. The statistical analysis found no such difference at the program level. The clinical analysis suggested that an undesired difference existed in Mean Disruptive Behavior occurred at Site A. Throughout the 2011-2012 school year, Mean Disruptive Behavior was 42.08% greater in
the fourth quarter than in the first, ending at 142.08% of the baseline amount. At Site D, the clinical analysis found the Mean Disruptive Behavior to be less in the fourth quarter than in the first. Specifically, the number of documented instances differed desirably by 54.39% ending at 45.61% of the baseline amount by the fourth quarter. The documented incidence of Mean Disruptive Behavior at Site D is less in the second quarter, is greater in the third quarter, and less once again in the fourth quarter. Therefore, conclusions about these data must be drawn cautiously as no clear trend is evident across the 2011-2012 school year.

Mean Disruptive Behavior Significance

Table XXVI and figures IV19 and IV20 below address sub-question 42, “Is there a desired difference in the occurrence of mean disruptive behaviors across all sites?” For information regarding the Mean Disruptive Behavior at individual sites, see Appendix F: figures F57-F64.
Table XXVI

*Mean Disruptive Behavior Significance—All Sites*

<table>
<thead>
<tr>
<th></th>
<th>Site A</th>
<th>Site B</th>
<th>Site C</th>
<th>Site D</th>
<th>All Sites</th>
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<tbody>
<tr>
<td>Statistical</td>
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<tr>
<td>Clinical</td>
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</tr>
</tbody>
</table>

*A significant difference is present suggesting decreasing incidents of disruptive behavior
** A significant difference is present suggesting increasing incidents of disruptive behavior
-- No significant difference present

Figures 4.19. and 4.20. Mean weekly/quarterly (respectively) amount of Mean Disruptive Behavior aggregated across all sites for which data is available.

**Research Question Two**

Eighteen sub-questions were evaluated using the ANOVA test to analyze trimesterly data. Levene’s test of Homogeneity of Variance was paired with the ANOVA. Following the ANOVA test, these data were also analyzed for clinical significance. As described in the Statistical Design of chapter three, the criteria for Math/Reading/Combined MAP test score growth to be clinically significant is met if scores differ positively at the rate of five/three/four standard score points per administration (e.g. Fall to Winter or Winter to Spring), respectively.

Table XXVII below summarizes for which of the eighteen sub-questions (43 through 60) statistically significant differences ($p < .05$) were found. Table XXVIII shows where clinical findings suggest desired differences in MAP test scores. Figures IV21, IV22, and IV23 display the results of the Math, Reading, and Combined MAP test scores for all sites combined and
answer sub-questions 48, 54, and 60, respectively. See Appendix G: figures G1-G15 for MAP score data at specific sites to answer sub-questions 43-47, 49-53, and 55-59.

Table XXVII

Analysis for Statistical Significance for Sub-questions Forty-Three through Sixty

<table>
<thead>
<tr>
<th></th>
<th>Math MAP Score</th>
<th>Reading MAP Score</th>
<th>Combined MAP Score</th>
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<tbody>
<tr>
<td>Site A</td>
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<td>Site B</td>
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<td>Site C</td>
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<td>Site D</td>
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<td>Site E</td>
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<tr>
<td>All Sites Combined</td>
<td>.046*</td>
<td>--</td>
<td>.004*</td>
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</tbody>
</table>

*p < .05
-- No significant difference present

Figure 4.21. Mean Math MAP scores for each trimesterly administration when all available data is aggregated.

Math Achievement, All Sites

Figure 4.22. Mean Reading MAP scores for each trimesterly administration when all available data is aggregated.

Reading Achievement, All Sites
Table XXVII reveals that statistical differences occurred for two out of 18 DVs (11.11%). Specifically, when Math MAP score and Combined MAP score data were aggregated for all sites (note: the Combined MAP scores are also an aggregate of the Math and Reading MAP scores), significant differences resulted from the ANOVA test. A visual analysis indicated a positive directionality for both differences.

Table XXVIII

Analysis for Clinical Significance for Sub-questions Forty-Three through Sixty

<table>
<thead>
<tr>
<th></th>
<th>Math MAP Score</th>
<th>Reading MAP Score</th>
<th>Combined MAP Score</th>
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<tbody>
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<td>Site A</td>
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<tr>
<td>Site B</td>
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<td>Site C</td>
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<td>Site D</td>
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<td>Site E</td>
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<tr>
<td>All Sites Combined</td>
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</table>

-- No clinically significant difference present
*Clinically significant difference present

Table XXVIII reveals that when the clinical criteria described in the Statistical Design section of chapter three (and earlier in this chapter) were applied to the data, 11 out of 18 DVs (61.11%) appeared to suggest increasing test scores across the three trimesters of the 2011-2012 school year. This finding suggests that more than half of the DVs relating to academic achievement were different in a positive direction. This is substantially greater than the two DVs
showing a positive difference from the ANOVA test. There are no DVs from either analysis which indicate a regression in scores (i.e., a statistically significant undesired difference).

For all sites combined, Math/Reading/Combined MAP scores differed desirably 10.23/6.69/8.65 standard score points where 10/6/8 points of growth, respectively, were required to meet clinical criteria for a significant positive difference across two consecutive trimesters. These findings suggest that for all areas of MAPs data, students enrolled in the CSSS-implemented SIPs were growing at approximately the same rate as their peers in the general population of the WCSD.

Summary

The fundamental purpose of this research evaluation study was to determine whether the CSSS system implemented in WCSD’s elementary SIP classrooms appeared to affect desired differences in disruptive student behavior while simultaneously leading to desired differences in student achievement in Mathematics and Reading. This post-facto research study investigated data from five school sites. Though behavioral data was only available to the researcher from four sites, MAP assessment data was collected from all five. Survey data relating to student and staff demographics and program information were also collected via questionnaires. Four out of the five schools in which the SIPs are embedded are also Positive Behavioral Support (PBS) schools. This means that in addition to the various behavioral reinforcements built into the CSSS program, students should be accessing additional school-based incentives for demonstrating appropriate behaviors. This may have had an impact on improvements demonstrated by students in behavioral domains. The specific effects of the PBS interventions on student behavior are impossible to isolate within the scope of this research evaluation study.

Student data was collected from 135 students residing across the entire school district. Approximately four-fifths of these students were male. Their ages ranged from five to 13 with a
mean age of 9.63 years (SD = 1.76 years). Fifty-four percent of these students were between the ages of 10 and 13. Students’ grade levels spanned from Kindergarten to sixth. Nearly two-thirds of these students were described racially as “White” with the largest minority group being “Hispanic” (approximately one-fifth). Students enrolled in the SIP classrooms represented some diversity in the disability category. The majority of these students (about three in five) were documented as receiving special education services under the eligibility category of “Emotional Disturbance.” The second most represented group (about one in five students) were those classified as “Health Impairment.” Relatively small numbers of these students were documented as eligible under the “Specific Learning Disability” and “Autism” categories. About two-thirds of these students for whom data was collected were also enrolled in the CSSS-implementing SIPs during the previous school year. The majority were reported by staff returning questionnaires to be staying enrolled for the next school year. A number of reasons were reported for those students who would not be attending SIPs again in the 2012-2013 school year with the most frequent explanation being “Completion of program/no longer eligible [for special education services].” Overall, about one student in 10 was expected to exit the program for this reason at the end of the 2011-2012 school year.

Where staffing is concerned, SIPs averaged three special education teachers, approximately one teaching assistant, and two to three teaching aides per site. Each site had either six or seven total staff members per site. Completed questionnaires indicated that at any given time during the school year (since students enter and exit the program throughout the year for a number of reasons), the average enrollment size for SIPs was approximately 20 or 21. This means that typical staff to student ratios at SIPs were one staff member for about every three students. Staff members at their respective SIPs were experienced. The average special
education teacher had taught at his or her respective school’s SIP for nearly four years (including the 2011-2012 school year); paraprofessionals averaged nearly three years of experience.

The Kruskal-Wallis H test was used to evaluate differences in disruptive behavior across the 2011-2012 school year. Results indicated that undesired differences in disruptive behavior were found with twice as many DVs as desired differences (eight vs. four). The results from this test suggested overall improvements in student behavior at Site D and trends suggesting undesirably differences occurring in the student disruptive behavior at Site A. It also suggested that, on average, students were earning fewer E Days and more U days. This is the opposite of what program staff aims to accomplish.

Analyses for clinical significance suggested somewhat different results. Specifically, after clinical criteria (described in the Statistical Design section of chapter three) were applied to the data, the results suggested desired differences in disruptive behavior for 10 DVs and undesired differences for 12 DVs. As with the findings from the Kruskal-Wallis H test, this analysis also lead to the conclusion that students were earning fewer E days and more U Days. Furthermore, the clinical analysis agreed with the statistical findings for differences in the number of Mean Disruptive Behaviors at Sites A and D. However, unlike with the statistical analysis, the clinical findings found that the number of Mean Disruptive Behaviors differed desirably/differed undesirably at Site B/C (respectively). Therefore, the clinical analysis found both promising and concerning differences at two SIP sites each. These results and their implications will be further discussed in Chapter Five.

The ANOVA test was used to evaluate differences in MAP test score data across the 2011-2012 school year and was paired with the Levene’s test of Homogeneity of Variances to check whether the assumption of homoscedasicity was met for these data. The Kruskal-Wallis H
test was used with (ordinal-level) behavioral data. The null hypothesis for homogeneity of variance was accepted for all 18 DVs relating to student MAP score data. The ANOVA found that when Math MAP test data were aggregated across all sites, a difference \((i.e.,\) improvement) at the \(p < .05\) level was present. Furthermore, when both Math and Reading MAP test scores were combined across all sites (referred to as Combined MAP scores), a difference suggesting elevated scores at the \(p < .01\) level was present.

An analysis of the MAP test scores according to the criteria established to determine clinical significance revealed several areas in which student achievement appeared to differ in desired directions. This was most common where data was aggregated. That is, three out of five (60%) sites displayed growth in their Combined MAP score data. Where data for all sites were combined, overall desired differences were found for all three areas: Math, Reading, and Combined MAP scores. Findings from this clinical analysis were substantially more promising than those yielded by the statistical test alone. These results and their implications will be further discussed in chapter V.
CHAPTER V: DISCUSSION

Student Behavior Data

Behavioral data from student point sheets were analyzed using the Kruskal-Wallis H test. Statistically significant differences were assessed for 42 DVs related to student behavior at four out of five SIP sites. Additionally, these data were evaluated according to predetermined criteria (outlined in the Statistical Design section of chapter three) to identify differences in DVs appearing to be clinically significant. The following discussion will summarize important findings across both of these analyses.

Excellent/Unsatisfactory Days

The most globally informative aspect of the student point sheet data are the Excellent (“E” for short) Day and Unsatisfactory (“U” for short) Day frequencies. The trends exhibited in these two areas provide the best overall summary of student behavioral patterns across the 2011-2012 school year (see Figures 4.1-4.4). This is due to the criteria by which students are assigned E Days and U Days. Students cannot earn E Days unless they meet the following criteria as stated in the CSSS program manual: a) “[they accrued] zero physical aggression,” b) “[they accrued] zero verbal aggression,” c) “[they] did not lose more than 8 other response cost points during the day,” and d) “[they] completed all work in all subjects or activities” (Silva & Sexton, 2010, p. 8). Therefore, an increasing frequency of E Days suggests that more students were behaving in a manner which is appropriate and functional to the classroom environment.

Conversely, U Days imply students exhibiting physical aggression, verbal aggression, low rates of Work Completion, or some combination thereof (Silva & Sexton, 2010). Therefore, an increasing frequency of U Days suggests more students were behaving in a manner which is inappropriate and non-functional to the classroom environment. This research evaluation study
for the 2011-2012 school year found a significant undesired difference in the proportion of students earning E Days throughout the school year for the CSSS program as a whole. Additionally, it found an undesired difference, both statistically and clinically speaking, in the percentage of students earning U Days.

Blurt Behavior

Regarding Blurt (BL) behavior, both statistical and clinical analyses revealed a significant undesired difference at Site A during the school year (see Appendix F: Figures F.17 and F.18). Upon visual analysis, it can be seen that BL behavior differed undesirably from the third to the fourth quarters. From the third to fourth quarter, documented BL behaviors grew by approximately 60%. The second significant finding related to BL behaviors was found through the clinical analysis. At Site B, BL behaviors differed desirably across quarters throughout the school year, differing by nearly 50% of the baseline amount by fourth quarter (see Appendix F: Figures 19 and 20). While this finding was not statistically significant, the result is still promising for this group of students according to a clinical interpretation. At least insofar as controlling inappropriate vocalizations is concerned, these students appeared to be more prepared to rejoin the general education environment by the end of the school year.

Work Completion

Unfortunately, data for student Work Completion (WC) was not available or had not been recorded consistently at the majority of SIP sites. This was the case with the rest of the data for desired student behavior (e.g., Teacher Attention, Problem-Solving, On-Task and others that were listed and defined in chapter one) as well. Site D was the only site with usable data for WC (see Figures 4.7 and 4.8). Although the mean percentage of student WC started at 90% and ended at 85% during the third and fourth quarters, this was neither found to be statistically nor
clinically significant. Finding a undesired difference in WC was perhaps more likely than finding a desired difference due to the ceiling effect of WC baseline scores. Therefore, the best interpretation of Site D’s WC scores is that students exhibited fairly high rates of WC throughout the 2011-2012 school year.

Out of Seat Behavior

Both statistical and clinical analyses indicated that Out of Seat (OS) behavior improved significantly for Sites B and D. The clinical analysis found this to be the case when all site data was combined for this behavior. At Site B, OS behavior first differed undesirably before the trend reversed from the third to the fourth quarter (see Appendix F: Figures F.25 and F.26). At Site D, the differences in OS behavior was particularly dramatic. The number of documented behaviors differed desirably by 57.00% from the first quarter ending at 43.00% of the baseline amount (see Appendix F: Figures F.29 and F.30). This difference was significant at the p < .001 level. For all sites combined, a visual analysis revealed that the differences occurred gradually. OS behavior differed desirably by 39.27% throughout the school year ending at 60.73% of the baseline amount. This finding bodes well for these students. Greater compliance with the requirement that students remain in their seats or assigned areas implies that they are demonstrating an understanding of classroom rules, improved impulse control, and an increased potential to participate appropriately in less restrictive school environments.

Off Task Behavior

Data for Off Task (OT) behavior was only available at Sites A and C. Both forms of analysis found that OT behaviors at Site A differed desirably. From the first quarter to the fourth quarter, the mean frequency of this behavior differed gradually to a total of over 60% (see Appendix F: Figures F.31 and F.32). This finding is particularly significant when considering
that Site A was also the only self-contained program which failed to show any evidence of MAP assessment score growth. It is plausible that students’ particularly high rate of OT behaviors at Site A interfered with their ability to acquire new academic learning during the 2011-2012 school year. For Sites A and C combined, a clinical analysis found the difference in OT behavior to be significant in a desired direction (see Figures 4.11 and 4.12). Because OT behavior is, according to program specifications, mutually exclusive from desired forms of student behavior (e.g., On Task, Problem Solving, Peer Cooperation), this trend suggests that over the course of the school year, students are becoming less likely to be engaged in academic learning and less compliant with staff instructions.

**Property Destruction Behavior**

Regarding Property Destruction (PD) behavior, both statistical and clinical analyses found that this became more frequently documented across the 2011-2012 school year at Site B. A visual inspection of the corresponding bar graph shows that this behavior differed undesirably by a total of 438% from the first to the fourth quarters at this location (see Appendix F: Figures F.37 and F.38). This trend is disconcerting given the safety implications, interruptions to the learning environment, and potential costs to the school incurred by this disruptive behavior. Also troubling is the finding from the clinical analysis that this form of undesired behavior was increasing for the program as a whole. Specifically, by the fourth quarter, the amount had grown by approximately 54% (see Figures 4.13 and 4.14). Fortunately, undesired differences in PD was not the case at every site. Site C exhibited a desired difference of about one-third of the baseline amount by the fourth quarter (see Appendix F: Figures F.39 and F.40).
Verbal Aggression Behavior

While the Kruskal-Wallis H test did not indicate that any differences took place with respect to student Verbal Aggression (VA) behaviors, a clinical analysis suggests that Site B did enjoy a desired difference of over 25% from the first to the fourth quarter (see Appendix F: Figures F.43 and F.44). The greatest difference was found between the first and third quarter, during which time this behavior had dropped by over 40%. Although no significant findings were found to take place for the program as a whole through either form of analysis, the findings at Site B are nevertheless promising. VA is a behavior which has the potential to seriously impact students by effectively excluding them from meaningful involvement across multiple social contexts (e.g., becoming disliked and unwelcomed in both school- and community-based environments). A visual inspection of the VA data at Site C reveals a clear difference when comparing the fourth quarter with all other quarters (see Appendix F: Figures F.45 and F.46). The fourth quarter amount of this behavior at Site C differed undesirably by a total of 376% from the first quarter. Put differently, VA at Site C ended in the fourth quarter at 476% of the baseline amount.

Physical Aggression Behavior

Although not evidenced by the statistical test, a clinical analysis reveals that a steady and significant increasing trend existed at Site A for Physical Aggression (PA) behavior. Comparing the first quarter with the second, third, and fourth revealed the differences of 220%, 265%, and 280%, respectively (see Appendix F: Figures F.49 and F.50). A dramatic difference in student PA behavior could certainly help explain the difficulties Site A appeared to demonstrate in affecting improvements in student MAP test scores. Finally, a clinical analysis suggested that some differences existed at Site D in PA behavior throughout the school year. The fourth quarter
incidence differed desirably by approximately 55% when comparing the first and fourth quarters (see Appendix F: Figures F.55 and F.56). The documented frequency of PA behavior in the fourth quarter was about 45% of the baseline amount. It should be noted, however, that there was a spike in this behavior during the third quarter obscuring a clear trend from emerging. It might be worth exploring possible hypotheses for the variation in PA behavior across the school year with staff members at Site D. The inherently disruptive, costly and unsafe nature of this behavior might make any insights worth the effort. Perhaps staff members across the CSSS program can share with one another helpful strategies for preventing or intervening effectively with students at risk of demonstrating aggressive forms of behaviors.

Mean Disruptive Behavior

A combination of statistical and clinical analyses on data from Site D demonstrated that differences in a desired direction were evident in four DVs and that differences in an undesired direction were found in two DVs (see Tables XIV and XV). Statistical analyses indicated that the Mean Disruptive Behavior was in differed desirably across quarters of the 2011-2012 school year at this location. Taking both forms of analysis into consideration, desired differences were evidenced with OS and PA behavior. Also taking into account the finding that students at Site D were improving at the same rate as their WCSD grade level peers on their Reading and Combined MAP test scores, these findings all bode well for them. Even so, it must be mentioned that the trend toward decreasing disruptive behaviors was not steady. An undesired difference in the Mean Disruptive Behavior was present in the third quarter. Conclusions drawn about student improvement at Site D should take this into account.

Site B also indicated areas differences in a desired direction in five DVs versus two DVs which demonstrated differences in undesired directions when combining the statistical and
clinical forms of analysis. The analysis for clinical significance found that the site as a whole demonstrated a desired difference in student disruptive behavior when comparing the fourth quarter with all other quarters. Therefore, the trend was not steady; rather, the greatest difference in this DV occurred from the third to the fourth quarter of the school year. A combination of statistical and clinical analyses suggested that BL, OS, and VA behaviors each differed desirably across quarters. These were all, therefore, areas of strength for Site B and ones upon which to perhaps capitalize in coming years for the program. Those areas which did not demonstrate desired differences—and in particular PD which differed significantly in an undesired direction during the year—might serve as ideal targets for growth for the future.

Student MAP Test Score Data

Data from the Measures of Academic Progress (MAP) Math and Reading tests were analyzed using the ANOVA test paired with the Levene’s test for homogeneity of variance to test the assumption of homogeneity. The null hypothesis was accepted for all 18 relevant DVs. Overall, the MAP assessment score data suggest several areas of improvement. As noted in chapter four, these differences were most clearly evident for the DVs for which data sets were first compiled prior to analysis (i.e., combining all sites’ data or combining both MAP assessment subjects). The evaluation for clinical significance was more sensitive to detecting differences than was the ANOVA test. Twenty-five percent of the DVs representing aggregated data in the statistical analysis suggested that students were improving the same as their same age WCSD peers. In the clinical analysis, the proportion of DVs indicating such growth was 75%. Regarding the clinical method of analysis, assessment score growth was evidenced at every site (and for all sites combined), except for Site A. By contrast, the ANOVA test results indicated significant differences at no individual site (only for the CSSS program as a whole for two DVs).
It is likely that with a larger sample size of students, differences in student MAP scores at individual sites would have been detected by the ANOVA test. Nevertheless, the fact that growth in MAP test scores for the program as a whole is revealed by both forms of analysis is promising. Finally, unlike the findings with the point sheet behavioral data, the MAP test score data yields considerably more positive results in that there were no areas in which MAP scores declined at a clinically or statistically significant rate. Given the well-documented learning problems characteristic for students with Emotional/Behavioral Disability (EBD), this is a welcome finding indeed.

As promising as was student growth in many areas of MAP assessment scores, these results cannot be attributed solely to teachers’ efforts in the CSSS-implementing elementary SIPs. A confounding variable to interpreting these results is the fact that as students earn their way to higher levels in this tiered behavioral program, they begin spending more time in the general education environment. It is not known from this research evaluation the mean percentage of time SIP students spent in general education classrooms. However, the instruction students received in these environments undoubtedly benefitted them and contributed to their MAP score gains. An acknowledgement that SIP students spent some time in general education classrooms is not intended to discount the role played by the SIP classrooms themselves; after all, if the challenging behaviors displayed by their students had not been shaped to become more classroom-appropriate, these students would not have been eligible to participate in these general education settings at all. Therefore, the growth demonstrated by students enrolled in these SIPs is best described as the synergistic result of the self-contained and general education classrooms working collaboratively together; the former provided a combination of instruction with
behavioral interventions while the latter took students who had demonstrated social-emotional and behavioral readiness and provided them with further academic instruction.

Hypotheses for Lack of Improvement

An examination of Site A combining the results of statistical and clinical analyses reveals concerning trends relating to undesired differences in frequencies of BL, OT, and PA behaviors. It is therefore, of little surprise that both forms of analysis indicated an undesired difference in the frequency of disruptive behaviors when all categories were combined (i.e., Mean Disruptive Behaviors). The fact that this self-contained program also failed to demonstrate MAP assessment score growth is particularly troubling. An investigation into possible hypotheses to help explain why this site appeared less successful than the others failed to yield useful insights. At first, the hypothesis was formed that Site A was less likely to experience improvements in student outcomes due to having less experienced personnel than the other locations. However, a review of the site demographics information collected found that the staff at Site A had more experience than other site staffs. The average teacher for this program had 6.17 years of experience, versus 3, 3.33, 3, and 3.67 years for Sites B, C, D, and E, respectively. The mean years of experience when combining teachers, assistants, and aides was 5.33 years at Site A. Sites B, C, D, and E averaged 3.16, 3, 3.43, and 2.43 years, respectively. Therefore, the hypothesis that Site A struggled to effect improvements in student academic and behavioral outcomes due to less experienced staff members was ruled out.

A second hypothesis was formed that perhaps Site A struggled more than other sites due to lower staff to student ratios in the classroom. However, this hypothesis was also rejected. In fact, Site A was found to have the smallest typical program size (16.5) of any of the locations. Furthermore, with six staff members, Site A enjoyed the highest staff to student ratio of any of
the self-contained programs (1:2.75). It is a concerning and unexpected finding that despite its advantages with regard to staff experience and staff to student ratios, Site A failed to demonstrate growth in the desired direction for any academic or behavioral DV. Furthermore, Site A demonstrated by far the most areas in which student behavior appeared to worsen than any other site. In combining the two forms of analysis, a sum of seven DVs indicated worsening student behavior. This means that Site A evidenced very nearly as many undesired student behavioral trends as Sites B, C, and D combined.

A third hypothesis was made that Site A struggled to demonstrably improve the performance of their students because it was the one SIP site which was not imbedded within a PBS school. Upon checking this school’s PBS status, this hypothesis was found to be false. Site A is located within a school actively implementing the PBS model in all classrooms and settings (e.g., hallways, cafeteria, playground, etc.).

Finally, a fourth hypothesis was made that Site A may have effected no apparent student growth due to a lack of support from WCSD behaviorists. This hypothesis was pursued and staff at each SIP site were anonymously asked to what extent their respective sites received the various behavioral and consultative supports described in the CSSS program manual. Although it was reported that Site A received very little assistance from behavior specialists, this was also the case at Sites B, C, and D. Site E appeared to receive the most support. It is therefore unfortunate that no point sheet data was available from it. The hypothesis then that Site A underperformed relative to the other sites on the basis of poor consultative support is false due to the reports of staff at the other SIPs. Students at Sites B, C, and D appeared to evidence growth in some regards despite reports affirming that their sites also lacked the benefit of such professional contact. Clearly, the findings at Site A bear implications relating to the need for
district-level supportive intervention to help this site to meet its program objectives to: a) "to help children acquire and develop effective, pro-social behaviors," b) "to support the children to make adequate academic progress," and c) "to extinguish behaviors that are impeding students’ ability to be successful in the regular classroom" (Silva & Sexton, 2010, p. 3).

**Data Issues**

One of the largest concerns which emerged from this study was related to the manner in which data were collected and maintained. These issues included problems with consistent and accurate data entry; problems with data usage, availability and accessibility; and problems with the data being used for accountability and planning purposes. Such issues were numerous and obvious throughout the data collection process. An extremely important principle intended to guide staff efforts at these SIPs is that of data-driven practice. This phrase is ubiquitous in the educational milieu in the twenty-first century; it pervades both the scholarly literature and educational rhetoric of administrators and policy-makers of school districts throughout the country. However, data cannot “drive” educational practices if they are not maintained and organized in an accessible or usable manner.

During the 2010-2011 school year, the WCSD’s SIPs enjoyed a high level of contact with behavior analysts, including masters- and doctoral-level UNR psychology interns. During this school year, all sites were instructed and expected to transfer point sheet data onto Excel spreadsheets. Staff conformity to these expectations was monitored by these behavior specialists. Graphs generated from these electronic documents were used in follow-up analyses. Such graphs could inform IEP and other multidisciplinary teams about student behaviors and patterns, guiding them in decision-making practices regarding goal-setting or appropriate placement setting modifications for students.
Unfortunately, coinciding with the reduction of services from the WCSD behavior specialists for the 2011-2012 school year, clear problems related to data management, organization, and accessibility at various SIP sites emerged. Because an in-depth review of the nature of these problems at each individual SIP site is outside the scope of this program study and because disclosing specific information in this area could lead to confidentiality issues, these problems will not be discussed here. Fortunately, none of the problems encountered at the individual sites are insurmountable. Rather, each issue represents an area which could be readily improved through goal-setting and targeted effort.

Perhaps an unspoken core belief embodied by the CSSS system and of the movement toward data-driven practice in education is that data should be regarded as a priority as opposed to an afterthought; should be seen as an asset as opposed to a burden; and efforts should be made to carefully maintain student data for those uses for which it is intended. If not addressed, program shortcomings related to the way data is (mis)handled are likely to undercut the potential of the CSSS system to positively impact students. Each site should strive to hold itself accountable to the CSSS program manual, Social Program Intervention: 2010-2011. That is, data should be carefully maintained and used in an on-going and regular manner for the purposes of “monitoring students’ progress” and “their responses to behavioral support and intervention” (Silva & Sexton, 2010, p. 27).

Consultation Issues

The 2010-2011 school year marks when the CSSS system was formally launched across the five “SIP Regional Centers” across the WCSD (Silva & Sexton, 2010, p. 3). During this year, these schools enjoyed a high level of contact with consulting behavior analysts. Consultation efforts included brief walk-through program fidelity/implementation checks in which teachers
were rated on several aspects of their implementation of program features (see Appendix H), longer observations during which behavior analysts documented student behaviors and aspects of staff program implementation such as percentage of student misbehaviors “consequated” appropriately, follow-up meetings with teachers to show them graphed results of their classroom performance, opportunities to set goals regarding their program implementation, and time to discuss topics of interest or concern to the teacher. The contacts between the behavior analyst and teacher were intended to be of a helpful—not punitive or evaluative—nature. A research evaluation study investigating student outcomes following this year of consistent, targeted, linked, and multi-modal intervention efforts found overwhelmingly positive results (Sexton, Ryst, et al., 2011). Specifically, Sexton, et al. (2011) relate that for the 2010-2011 school year, the CSSS system resulted in “positive student academic, behavioral and mental health outcomes, and positive staff training and coaching outcomes, to ensure sustainability of the system” (p. 22).

During the 2011-2012 school year, WCSD stakeholders for the CSSS system were heavily invested in attempting to implement a modified version of this behavioral framework to the secondary level SIPs (adjustments being made in an attempt to improve its age-appropriateness). As a result, only minimal time was built into the schedules of behavior analysts to work with elementary SIP staff. This made the full implementation of those systemic practices clearly outlined by Sexton (2010) in the Comprehensive Student and Staff Support Program educational grant document unfeasible. Such services include time to assist with “[d]ata-based decision making,” “[o]perationalizing target behaviors,” “[h]ypotheses generation and testing,” “[c]learly defin[ing] replacement behaviors, conducting “[i]mplementation and fidelity measures,” and providing “[t]eacher input to the process and performance feedback” and “follow-up and evaluation” (p. 5). Staff at the five SIP sites, in the course of discussing with the
researcher how the year had gone, indicated that behavior analysts worked with them infrequently (e.g., “a handful of times over the whole school year”) or only when their assistance was specifically requested. Some sites chose to abstain from requesting any help during the 2011-2012 school year. Therefore, the way the CSSS program was implemented de facto during this school year was significantly different from 2010-2011 during which time sweeping positive student progress was documented. Although the explicit goal for all SIP sites is for them to eventually become self-sustaining, the abrupt and near-complete disappearance of consultative support from the district’s behavioral staff to the elementary SIPs from the 2010-2011 to the 2011-2012 school year is a marked concern for which recommendations follow.

Implications and Recommendations

One implication from this study’s findings is related to the data issues discussed earlier in this chapter. Namely, the short-coming related to data availability at several SIP sites must be addressed. The result of eight DVs could not be assessed due to the absence of corresponding data. A substantial number of data were unavailable in easily usable formats because they were never inputted digitally. Other data had been entered digitally but were lost during computer software conversions. Administration at Site E admitted a lack of awareness as to where to locate necessary data. This implies that program performance, at least at this site, could not be assessed by building-level (or above) administration.

Given the WCSD’s initiative to be data-driven, efforts to make SIP data available must not only be re-doubled, but must be sustained. Without careful documentation of program data, no evaluation research is possible. Therefore, changing the current practices at several of this district’s elementary SIPs must become a priority. Ideally, behavioral data should become just as accessible to administration (at all appropriate levels) as any other form of data under their
purview. Therefore, one recommendation which may make regular data maintenance more feasible pertains to increased time allocated to staff for the express purpose of entering data.

Informal conversations with some special education teachers and paraprofessionals led to the finding that very little time is built into the schedules of SIP staff members to attend to such tasks. Rather, their time tends to be occupied by the other important aspects of their respective positions. Some administrative attention should be given to this issue to see where time can be set aside for the task of data entry and maintenance.

Another important implication resulting from this study is that efforts must be made to improve the implementation fidelity of the CSSS program. Efforts should be made by appropriate personnel in the WCSD to implement the CSSS system as it was intended, as it is described in the corresponding program manual, and as it was previously implemented. During the 2010-2011 school year, Sexton et al. (2011) demonstrated that students experienced positive outcomes across academic and behavioral domains following the full implementation of the CSSS program during this school year. Specifically, it is recommended that the variety of consultative services which were in place during the 2010-2011 school year by behavioral specialists resume in full force. Overall, student data failed to demonstrate improvements in student behavioral outcomes during the 2011-2012 school year when this substantial component of the package of CSSS system services was missing. In fact, some evidence supports the assertion that students tended to regress with regard to their behavioral functioning. Specifically, the finding that the number of E Days, U Days, OT behaviors, and PD behaviors differed undesirably (according to a combination of statistical and clinical analyses) for the program as a whole supports this possibility. It is reasonable that throughout the 2011-2012 school year, students would have regressed behaviorally from their level of functioning during 2010-2011.
when a greater number of behavioral services were in place. Although this is only a hypothesis, it is plausible (even expected) that a reinstatement of the behavioral and consultative services provided WCSD’s Behavior Analysis Department staff will have a positive impact on student behavioral outcomes in the future.

It is highly recommended that after implementation fidelity has been achieved for the CSSS program, a follow-up research evaluation should be conducted. Until the CSSS framework is being implemented in elementary SIP classrooms the way it was intended, it is impossible to know whether the widespread lack of student behavioral improvement found during the 2011-2012 school year was due to fundamental flaws in the CSSS program, was a result of the program not being implemented as planned, or was a combination thereof. It is crucial to know whether the CSSS program is useful in helping educational professionals achieve their objectives when implemented correctly. Despite the finding that the WCSD SIPs were successful during 2010-2011, it cannot be assumed that the program will be successful or as successful every year. That is, previous program evaluation does not excuse the requirement for current or on-going evaluation. Changes in program staff, student population, and other factors are constantly in effect both inside and outside of SIP classrooms and have subtle impacts upon program performance. Furthermore, the process of program evaluation can be informative to staff and administration involved in CSSS SIP sites. That is, beyond answering the question, “Is it working?” with a simple “yes” or “no” answer, program evaluation can be useful as both a formative and summative assessment tool. In the former case, results from an analysis of program data can guide day-to-day practice during a given school year; in the latter, results can guide team planning related to intervention efforts for an upcoming school year. Finally, given the quantity of resources invested in the program and the student population being served (i.e.,
EBDs tend to be severely impacted and warrant the use of immediate and targeted interventions to alter the characteristically poor prognoses of diagnosed children) program evaluation should be a regular and on-going process.

Finally, if implementation fidelity is fully achieved and follow-up program evaluation for elementary SIP classrooms implementing the CSSS framework fails to find that program objectives are being satisfactorily achieved, alternative models of service delivery for students with EBD should be explored. The estimated annual spending of $25,000 per student for the CSSS system during times of limited economic resources can only be reasonably justified when the program is meeting its objectives. That is, without sufficient evidence that students are showing significant improvement in behavioral domains, it is difficult to justify so large an investment of finite school district dollars. Furthermore, given the finding from this program evaluation that only about one student in ten (10.37%) successfully completed the program by the end of the school year, it could be estimated that approximately $250,000 were invested during the 2011-2012 school year in order for one child to make enough progress to transition back into a less restrictive environment.

It is difficult to decide exactly what percentage of students should successfully complete the program each school year in order for the program to be deemed a success. This is especially true considering how great the impact may be for a single student whose behaviors demonstrate significant improvements. Targeted efforts during the elementary years of a child’s life may lead him or her to a considerably more productive and satisfying life than would occur without such timely intervention. From a societal standpoint, it must be considered that even if the early intervention provided by the CSSS positively impacts only a minority of those students it serves, this may be a worthwhile investment. Children with EBD are at increased risk for outcomes such
as grade repetition, need for more restrictive special education placements, later high school dropout, theft, graffiti, and other delinquency, as well as increased acts of violence and/or abuse toward others, substance abuse, unplanned pregnancy, unemployment, and welfare dependency (Barnett, 2004; Lewis et al., 2010). Deterring children from such problems will not only serve to improve their quality of life but saves their communities money in the long-run. Barnett (2004) argues that quality early intervention with young children is a sound economic investment as the savings recouped from mental health interventions which serve to prevent children from falling into such outcomes is substantial. While it may be impossible to calculate what percentage of successful students would be needed to produce long-run savings equal to the per pupil spending of this program, few would argue that stakeholders in the CSSS program should aim higher than graduating one student in 10 from its SIPs into less restrictive educational placements. Certainly the goal for educators serving this population should be to continually benefit the students in their classrooms as much as possible.

Finally, it should be noted that while student MAP scores improved in many cases, there is still room for growth. After all, regarding Math/Reading/Combined MAP scores, mean scores grew 10.23/6.69/8.65 standard score points, respectively, where 10/6/8 points were required to meet clinical criteria. While this finding is positive in that it suggests that students in WCSD’s SIPs were growing as fast as the general student population, it is insufficient to catch students who lag behind expected grade-level academic performance. At this rate, a student spending his or her entire elementary school career in this setting fail to catch up by a single grade level of academic performance. The goal must be for these students to not only match but to exceed the growth rate of their peers. Therefore, developers, implementers, and other stake-holders in the
CSSS program would be well-advised to continue seeking ways to enhance the academic and instructional aspects of the program.

**Limitations**

One clear limitation of this study was caused by the unavailability of point sheet data from Site E. This loss immediately limited the study to having data for 80% of its potential behavioral DVs. In some cases, even from those sites which provided digital point sheet data, some data categories were absent. For example, Site B did not record OT behavior and Site D did not document PD behavior. Such incidents effectively reduced the amount of data which was expected to result from the data collection process. Finally, from Site A which provided hard copies of point sheets, there was a problem of inconsistent documentation of students’ WC. This rendered this data set unusable for the study. Each of these situational factors limited the potential of the study to find important statistical and clinical differences where they may exist and the subsequent conclusions which could be drawn from such findings. Specifically, Tables XIV and XV show that out of the 50 possible DVs which could have resulted from point sheet data at the four remaining sites, no data is available for eight. Given that optimum data availability from all five sites would have resulted in 60 behavioral DVs and data for 42 DVs from this study were collected, this amounts to some 30% of total 2011-2012 CSSS program data which was not available for analysis in this study.

A second limitation of this study involves the human subjectivity factor inherent in the behavioral data examined. That is, despite the fact that procedures in the CSSS manual are outlined for staff members, each individual teacher and paraprofessional is unique in personality, temperament, style, sensory ability, understanding of program procedures, and numerous other variables. Personalities, temperaments, and styles will inevitably impact the way staff members
interact with their students, including certain aspects of program implementation. Staff members with keener senses of sight and hearing will be inherently better equipped to “catch” students committing certain forms of undesired behavior than other staff members. Finally, differences in staff members’ understanding of the program’s rules, procedures, and operational definitions of target behaviors will have subtle influences upon their implementation practices. This was one reason that data from individual sites were not compared with one another. Subjectivity factors are fully expected to be inherent in the data sets and make statistical comparisons between sites unfair and inappropriate.

A third limitation of this study is the fact that another behavior intervention package was currently in place for four out of the five SIPs. Specifically, all sites except Site C were implementing the Positive Behavior Support (PBS) model during the 2011-2012 school year. The differences underlying these schools with regard to PBS cannot be reduced to simply whether or not they were using PBS. It is likely that there are important differences in the types of PBS’s in place for Sites A, B, D, and E and the specific methodology of their implementation (i.e., PBS is a framework answering the question of why rather than a set of precise instructions answering the what and how behind implementing the supports). The level of impact the PBS model has is likely to vary somewhat by site and staff. For all of these reasons, PBS implementation cannot be ruled out as a confounding variable in four out of five of the SIPs from which data was collected.

A fourth limitation of this research evaluation relates to its research design. All analyses in this study were done in a post-hoc fashion. The only conclusions which can be drawn from this study relate to events which have already occurred; nothing can be said with certainty about future events. The results, therefore, are post-dictive and not predictive. Furthermore, no
experiment took place within this program evaluation. There was no random assignment of subjects to groups; the researcher was in no way able to control relevant variables prior to the beginning of the 2011-2012 school year.

A fifth limitation of this study also relates to its research design. The statistical analyses chosen—the Kruskal-Wallis H test and the ANOVA—are intended for use with independent groups. However, the sets of data are not independent from one another because data for individual students exists in data sets for at least two trimesters (for MAP score data) and at least three quarters (for point sheet data). The assumption of independent groups for both statistical tests has been breached. Using tests calling for dependent data sets was also not appropriate. This is because student transience and difference in attendance disqualified student data from meeting the criteria of dependent groups. Therefore, the selection of a statistical approach for analyzing the data for this study was difficult. Because the Kruskal-Wallis H and ANOVA were used with data sets not meeting all requisite assumptions, their results should be interpreted with some caution.

A final limitation of this study is that, in a sense, the study did not accomplish its stated purpose. That is, this study was intended to evaluate the extent to which the CSSS program met its stated program objectives. These were to: a) "help children acquire and develop effective, pro-social behaviors," b) "support the children to make adequate academic progress," and c) "extinguish behaviors that are impeding students’ ability to be successful in the regular classroom" (Silva & Sexton, 2010, p. 3).

It could be argued that because important features of the CSSS framework were not implemented, the CSSS system was, in reality, not in effect. All that can be concluded pertains to the extent to which the program objectives were met when a certain portion of the CSSS
framework was used during the 2011-2012 school year. This immediately limits the research findings from making conclusive statements regarding the CSSS system; the potential for this framework to effect positive outcomes in students’ social, emotional, and behavioral domains of functioning was not learned from this study. Perhaps what has been learned the best from this study is what combination of interventions did not work versus what did work.

**Summary**

The primary purpose of this program evaluation was to investigate the extent to which the CSSS system, implemented in the five elementary school SIP classrooms of the WCSD, was successful in helping children to improve socially, emotionally, behaviorally, and academically. This intervention framework was developed by a multi-disciplinary team composed of diverse educational and behavioral experts. Both statistical and clinical forms of analyses were used to review student point sheet data collected from SIP classrooms as well as MAP achievement test score data. Survey data relating to student and staff demographics were collected as well as information more generally relating to the program. Data were collected from all SIP sites with the exception of point sheet data from which data were gathered from four sites.

Both the statistical and clinical forms of analysis found that results for more dependent variables (DVs) suggested movement in undesired directions than did results demonstrating differences in positive directions. Specifically, the Kruskal-Wallis H test statistical test along with visual analysis indicated that eight DVs demonstrated differences in an undesired direction versus four which demonstrated desired differences (see Table XIV). After applying clinical criteria (specified in the Statistical Design section of chapter three) to these data, 12 DVs evidenced undesired differences versus 10 which evidenced desired differences (see Table XV). When the results of the statistical and clinical analyses were overlapped (see Table XVI), four times as many DVs were found for which both analyses agreed and suggested undesired
behavioral differences as desired differences (eight DVs vs. two DVs, respectively). In short, this program evaluation found that neither the first program objective, “to help children acquire and develop effective, pro-social behaviors,” nor the third program objective, “to extinguish behaviors that are impeding students’ ability to be successful in the regular classroom” were met (Silva & Sexton, 2010).

Both the ANOVA statistical test (paired with the Levene’s test of homogeneity of variance to check the assumption of homogeneity of variance) and clinical analysis were used to evaluate student MAP test scores in the academic areas of Math and Reading. The null hypothesis was not rejected for any 18 DVs relating to MAP score data. Results from the statistical test paired with visual analysis found that, for all sites combined, Math MAP scores differed (with an upward trend across trimesters). The ANOVA test also indicated that Combined (the result of aggregating the Math and Reading MAP score data sets) MAP assessment scores for all sites combined differed across trimesters (with the Winter and Spring mean scores being higher than in the preceding trimester). When criteria for clinical analysis were applied to these data, significant growth in MAP scores was found in almost two-thirds of the DVs (11 out of the 18 DVs). Therefore, it is reasonable to conclude that the second CSSS program objective, “to support the children to make adequate academic progress,” was met (Silva & Sexton, 2010).

Incidental and informal sources of information (e.g., correspondence with SIP staff members) revealed some areas of concern. These include: problems related to consistent and accurate data entry; problems related to data usage, availability, and accessibility; problems related to program accountability and the use of data for planning purposes; and problems related
to the integrity and fidelity with which the CSSS framework was implemented during the 2011-2012 school year.

It is recommended that these areas be targeted as areas of future improvement. Given the relative cost to implement the CSSS system, bolstering any areas of weakness within the program should become a high priority for the WCSD. This is not only true from the perspective of fiscal responsibility, but also for reasons related to the professional fiduciary responsibility of school district employees toward students challenged by severely impacting disabilities. After adequate attempts have been made to improve program implementation fidelity, it is recommended that follow-up research evaluation be conducted. It is hoped that the CSSS framework, properly implemented, will demonstrate the capacity to greatly effect social, emotional, behavioral, and academic improvements in its targeted population. However, in the absence of such findings, it is imperative that the WCSD explore more fiscally responsible models as well as alternative approaches which will have the positive and desired impact upon the elementary school students it is committed to serve.
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Appendix A: CSSS Behavioral Point Sheet

Level 1 Point Card (K-3)

Name: ______________________ Date: ______________________

Please give points for each interval during each half hour by placing your initial under the corresponding time.

<table>
<thead>
<tr>
<th>9:30</th>
<th>10:00</th>
<th>10:30</th>
<th>11:00</th>
<th>11:30</th>
<th>12:00</th>
<th>12:30</th>
<th>1:00</th>
<th>1:30</th>
<th>2:00</th>
<th>2:30</th>
<th>3:00</th>
<th>3:30</th>
<th>4:00</th>
</tr>
</thead>
</table>

Level 1 Skill | Teacher Assistance – TA
Level 1 Skill | Following Instructions – FI
Level 1 Skill | Calm Person – CP
Level 2 Skill | Accepting No – AN

Level 3 Skill | Accepting Criticism – AC
Level 3 Skill | Peer Cooperation – PC
Level 3 Skill | Disagreeing – D

General Skill | Transition – T
General Skill | Ignore – I
General Skill | Manners – M
General Skill | Peer Reporting – PR

Subject Points

<table>
<thead>
<tr>
<th>Subject Points</th>
<th>0</th>
<th>3</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>0= No work or less than ½ completed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3= ½ or more work completed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6= 100% of work completed</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Subject | 0 | 3 | 6 |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus</td>
<td>EDMARK</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Note/Agenda</td>
<td>Writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homework</td>
<td>Spelling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morning Work/Breakfast</td>
<td>Recess</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Math</td>
<td>Social Studies/Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>PM Activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lunch/Free Time</td>
<td>Specials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D.E.A.R.</td>
<td>Specials/Group/Individual</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bonus Points

Total Points: ____________

Level 1 +10
Interval ____________
Skills ____________
Subject ____________
-Respect Cost ____________
Appendix B: Generic Memorandum to Schools

A Program Evaluation of the Comprehensive Student and Staff Support (CSSS) System in the Washoe County School District of Nevada

By

Michael G. Perrin, M.S., M.A., Ed.S.

Purpose: To analyze the extent to which the elementary Social Intervention Programs (SIPs) and Day Treatment program in the WCSD are meeting their states program goals relating to student progress in academic, behavioral, and social-emotional domains.

BENEFIT to (school name): Analysis of data specific to your program. The analysis will focus on areas of strength and success as well as those which may be useful for data based improvements or goals setting. I can submit school specific data to you but ALL future reports to WCSD of academic publishing will be anonymous. (i.e., there would be no way to know from which SIP site data was collected so that the performance of individual sites cannot be compared).

What is needed from your site:

1) Measures of Academic Progress test scores—Mathematics and English/Language Arts test scores for all students who attended your SIP during the present school year for the Fall, Winter, and Spring administrations is needed

2) Student/Site demographic worksheet—(see attached) Note that the worksheet requires all names be removed prior to return.

3) Daily point sheet data—all data compiled from the current school year (preferably digital format though hard copy can be used

I can assist with gathering data or compensate the assigned person if it requires after school time to complete.

I know the school year is ending soon so time is very important. Thank you for assisting with this project.

Confidentiality: All student information will be completely anonymous. All names and personally identifiable information will be removed prior to collection by the researcher. Furthermore, neither the names of schools nor the names of staff members will be published in any fashion.
## Appendix C: 2011-2012 Student and Site Information Worksheets

### 2011-2012 STUDENT INFORMATION WORKSHEET*

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student name</strong></td>
<td><strong>Student #</strong> &amp; Gender</td>
<td>Season of Birth</td>
<td>Year of Birth</td>
<td>Grade</td>
<td>Ethnicity Code</td>
<td><strong>Enrollment information (check the corresponding box for each question)</strong></td>
</tr>
<tr>
<td>1</td>
<td>Male</td>
<td>Fall</td>
<td>1</td>
<td>2011</td>
<td></td>
<td>1st Day Q 1/1 Quarter Q/2nd Quarter Q/3rd Quarter Q/4th Quarter Q If not Beginning, what date (if known): __________?</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>Winter</td>
<td>2</td>
<td>2011</td>
<td></td>
<td>No ☐ Yes ☐</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Winter</td>
<td>3</td>
<td>2011</td>
<td></td>
<td>No ☐ Yes ☐</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Summer</td>
<td>4</td>
<td>2011</td>
<td></td>
<td>a) Moved out of area ☐ b) Successful program completion ☐ c) No longer eligible for services ☐ d) Injury/Medical/Death ☐ e) Other (specify): __________</td>
</tr>
<tr>
<td>2</td>
<td>Male</td>
<td>Fall</td>
<td>5</td>
<td>2011</td>
<td></td>
<td>1st Day Q 1/1 Quarter Q/2nd Quarter Q/3rd Quarter Q/4th Quarter Q If not Beginning, what date (if known): __________?</td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>

* Slightly modified—the actual questionnaire was provided on legal-sized paper allowing larger spaces for hand-writing and larger font sizes.
** Four nearly-identical, additional pages were provided allowing a maximum of 40 student entries. In the interest of space, only the first page is shown.
2011-2012 STUDENT INFORMATION WORKSHEET INSTRUCTIONS

Column 1: This column is for your convenience only. It is a place to put the student’s name or even a pseudonym—whatever will help you keep track of all the students for whom you have collected data. Because this study requires that all student information be anonymous to the researcher, these must be removed before submitting. If sending as a hard copy, please use scissors or paper cutter to remove this column. If sending electronically, please delete names before submitting.

Column 2: Please indicate each student’s gender. The student numbers are simply to track the number of students per site.

Column 3: Please indicate each student’s season of birth.

Column 4: Please indicate each student’s year of birth.

Column 5: Please indicate each student’s grade (during the 2011-2012 school year)

Column 6: Please indicate each student’s ethnicity code from the following categories (feel free to use the abbreviations provided):
   a) American Indian/Alaska Native (AI/AN)
   b) Asian/Pacific Islander (A/PI)
   c) Black (not Hispanic) (B)
   d) Hispanic/Latino (H/L)
   e) White (not Hispanic) (W)
   f) Multiracial (M)

Column 7: If possible, please indicate each student’s special education eligibility category from the following categories (feel free to use the abbreviations provided):
   a) Autism (A)
   b) Deaf/Blind (D/B)
   c) Developmental Delay (DD)
   d) Emotional Disturbance (ED)
   e) Health Impairment (HI)
   f) Hearing Impairment/Deaf (HI/D)
   g) Mental Retardation (MR)
   h) Multiple Impairment (MI)
   i) Orthopedic Impairment (OI)
   j) Specific Learning Disability (SLD)
   k) Speech/Language Impairment (S/LI)
   l) Traumatic Brain Injury (TBI)
   m) Visual Impairment/Blind (VI/B)

Column 7:
1. If a student did not attend in your Social Intervention Program since the beginning of the 2011-2012 school year, please put the date that the student enrolled (this might be evident from point sheet data). If the exact date is unknown, please answer with the month of enrollment.

2. Indicate whether the student also attended this program during the previous school year (2010-2011).

3. Indicate whether the student left the program (and did(has not return(ed)) sometime before the end of the 2011-2012 school year.

4. If the answer to 3 is “yes,” please select a reason or specify in “Other.” Otherwise, this question is not applicable.

Other: Please back up all student information (preferably electronically) in a secure location before submitting to safeguard against potential loss.
2011-2012 SITE INFORMATION WORKSHEET

1) Was your school a Positive Behavior Intervention (PBS) school during the 2011-2012 school year? (answer “yes,” “no,” or “in-progress”)
   Yes □     No □     In-progress (please specify if you can) ___________/________________________________________

2) How many full-time special education teachers worked in this Social Intervention Program (SIP) during the 2011-2012 school year?
   __________

3) How many part-time special education teachers worked in this Social Intervention Program (SIP) during the 2011-2012 school year?
   __________

4) How many full-time teaching assistants worked in this Social Intervention Program (SIP) during the 2011-2012 school year?
   __________

5) How many part-time teaching assistants worked in this Social Intervention Program (SIP) during the 2011-2012 school year?
   __________

6) On average, approximately how many students were enrolled in this program at any one time (since some students enter and exit the program throughout the year)?
   __________

7) Including this year (as one full year), how long have the special education teachers and teaching assistants in this program worked at this SIP (excluding any prior experience)?
   Teacher #1: _____ years  Teacher #2: _____ years  Teacher #3: _____ years  Teacher #4 (if applicable): _____ years  Teacher #5 (if applicable): _____ years
   Assistant #1: _____ years  Assistant #2: _____ years  Assistant #3: _____ years  Assistant #4 (if applicable): _____ years  Assistant #5 (if applicable): _____ years

8) Please attach one blank copy of your site’s point sheet for reference.
   __________ (initial or check off when complete)
Appendix D: Visual Displays of Student Demographic Information

### Percent of Students by Age

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<td>Age 12</td>
<td>12%</td>
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### Percent of Students by Grade

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<td>5th G</td>
<td>22%</td>
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<tr>
<td>6th G</td>
<td>26%</td>
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</tbody>
</table>
Percent Students by Ethnicity

- White: 64%
- Hispanic/Latino: 21%
- Black: 7%
- Multiracial: 4%
- American Indian/Alaska Native: 3%
- Asian/Pacific Islander: 1%

Percent of Students by Special Education Eligibility Category

- Emotional Disturbance: 63%
- Health Impairment: 23%
- Specific Learning Disability: 7%
- Autism: 7%
Student Outcomes for 2012-2013 School Year

- Remaining in program: 77%
- Moving/moved: 5%
- Going to middle school: 6%
- Completed program/ no longer eligible: 11%
- More restrictive placement: 1%
- Completed program/ no longer eligible: 11%

Student Outcomes for 2012-2013 School Year
Appendix E: MAP Score Data Organizer

**MAP Scores**

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</table>

*Remove names entirely prior to returning to researcher*
Appendix F: Results for Research Question One: Sub Questions One through Forty-Two

1. Is there a desired difference in the frequency of “E days” earned by students at site A?

Figures F.1 and F.2. Mean weekly/quarterly (respectively) proportion of students earning E Days for Site A.

2. Is there a desired difference in the frequency of “E days” earned by students at site B?

Figures F.3 and F.4. Mean weekly/quarterly (respectively) proportion of students earning E Days for Site B.

3. Is there a desired difference in the frequency of “E days” earned by students at site C?

Figures F.5 and F.6. Mean weekly/quarterly (respectively) proportion of students earning E Days for Site C.

4. Is there a desired difference in the frequency of “E days” earned by students at site D?

Figures F.7 and F.8. Mean weekly/quarterly (respectively) proportion of students earning E Days for Site D.
6. Is there a desired difference in the frequency of “U days” earned by students at site A?

7. Is there a desired difference in the frequency of “U days” earned by students at site B?

8. Is there desired difference in the frequency of “U days” earned by students at site C?

9. Is there a desired difference in the frequency of “U days” earned by students at site D?
11. Is there a desired difference in the frequency of “Blurting” behavior for students at site A?

Figures F.17 and F.18. Mean weekly/quarterly (respectively) number of BL behaviors for Site A.

12. Is there a desired difference in the frequency of “Blurting” behavior for students at site B?

Figures F.19 and F.20. Mean weekly/quarterly (respectively) number of BL behaviors for Site B.

13. Is there a desired difference in the frequency of “Blurting” behavior for students at site C?

Figures F.21 and F.22. Mean weekly/quarterly (respectively) number of BL behaviors for Site C.
16. Is there a desired difference in the frequency of “Out of Seat” behavior for students at site A?

*Figures F.23 and F.24.* Mean weekly/quarterly (respectively) number of OS behaviors aggregated for Site A.

17. Is there a desired difference in the frequency of “Out of Seat” behavior for students at site B?

*Figures F.25 and F.26.* Mean weekly/quarterly (respectively) number of OS behaviors aggregated for Site B.

18. Is there a desired difference in the frequency of “Out of Seat” behavior for students at site C?

*Figures F.27 and F.28.* Mean weekly/quarterly (respectively) number of OS behaviors aggregated for Site C.

19. Is there a desired difference in the frequency of “Out of Seat” behavior for students at site D?

*Figures F.29 and F.30.* Mean weekly/quarterly (respectively) number of OS behaviors aggregated for Site D.
21. Is there a desired difference in the frequency of “Off-Task” behavior for students at Site A?

Figures F.31 and F.32. Mean weekly/quarterly (respectively) number of OT behaviors for Site A.

22. Is there a desired difference in the frequency of “Off-Task” behavior for students at Site C?

Figures F.33 and F.34. Mean weekly/quarterly (respectively) number of OT behaviors for Site C.
24. Is there a desired difference in “Property Destruction” behavior for students at Site A?

*Figures F.35 and F.36. Mean weekly/quarterly (respectively) number of PD behaviors aggregated for Site A.*

25. Is there a desired difference in “Property Destruction” behavior for students at Site B?

*Figures F.37 and F.38. Mean weekly/quarterly (respectively) number of PD behaviors aggregated for Site B.*

26. Is there a desired difference in “Property Destruction” behavior for students at Site C?

*Figures F.39 and F.40. Mean weekly/quarterly (respectively) number of PD behaviors aggregated for Site C.*
28. Is there a desired difference in “Verbal Aggression” behavior for students at Site A?

*Figures F.41 and F.42. Mean weekly/quarterly (respectively) number of VA behaviors for Site A.*

29. Is there a desired difference in “Verbal Aggression” behavior for students at Site B?

*Figures F.43 and F.44. Mean weekly/quarterly (respectively) number of VA behaviors for Site B.*

30. Is there a desired difference in “Verbal Aggression” behavior for students at Site C?

*Figures F.45 and F.46. Mean weekly/quarterly (respectively) number of VA behaviors for Site C.*

31. Is there a desired difference in “Verbal Aggression” behavior for students at Site D?

*Figures F.47 and F.48. Mean weekly/quarterly (respectively) number of VA behaviors for Site D.*
33. Is there a desired difference in “Physical Aggression” behavior for students at Site A?

Figures F.49 and F.50. Mean weekly/quarterly (respectively) number of PA behaviors for Site A.

34. Is there a desired difference in “Physical Aggression” behavior for students at Site B?

Figures F.51 and F.52. Mean weekly/quarterly (respectively) number of PA behaviors for Site B.

35. Is there a desired difference in “Physical Aggression” behavior for students at Site C?

Figures F.53 and F.54. Mean weekly/quarterly (respectively) number of PA behaviors for Site C.

36. Is there a desired difference in “Physical Aggression” behavior for students at Site D?

Figures F.55 and F.56. Mean weekly/quarterly (respectively) number of PA behaviors for Site D.
38. Is there a desired difference in Mean Disruptive behaviors for students at Site A?

Figures F.57 and F.58. Mean weekly/quarterly (respectively) amount of Mean Disruptive Behavior for Site A.

39. Is there a desired difference in Mean Disruptive behaviors for students at Site B?

Figures F.59 and F.60. Mean weekly/quarterly (respectively) amount of Mean Disruptive Behavior for Site B.

40. Is there a desired difference in Mean Disruptive behaviors for students at Site C?

Figures F.61 and F.62. Mean weekly/quarterly (respectively) amount of Mean Disruptive Behavior for Site C.

41. Is there a desired difference in Mean Disruptive behaviors for students at Site D?

Figures F.63 and F.64. Mean weekly/quarterly (respectively) amount of Mean Disruptive Behavior for Site D.
Appendix G: Results for Research Question Two: Sub Questions Forty-Three through Sixty

43. Is there a desired difference in Math MAP test scores at Site A?

![Math Achievement, Site A](image)

*Figure G1: Math Achievement, Site A*

44. Is there a desired difference in Mean Disruptive in Math MAP test scores at Site B?

![Math Achievement, Site B](image)

*Figure G2: Math Achievement, Site B*

45. Is there a desired difference in Mean Disruptive in Math MAP test scores at Site C?

![Math Achievement, Site C](image)

*Figure G3: Math Achievement, Site C*
46. Is there a desired difference in Mean Disruptive in Math MAP test scores at Site D?

![Math Achievement, Site D](image)

*Figure G4: Math Achievement, Site D*

47. Is there a desired difference in Math MAP test scores at Site E?

![Math Achievement, Site E](image)

*Figure G5: Math Achievement, Site E*
49. Is there a desired difference in Reading MAP test scores at Site A?

![Figure G6: Reading Achievement, Site A](image)

50. Is there a desired difference in Reading MAP test scores at Site B?

![Figure G7: Reading Achievement, Site B](image)

51. Is there a desired difference in Reading MAP test scores at Site C?

![Figure G8: Reading Achievement, Site C](image)
52. Is there a desired difference in Reading MAP test scores at Site D?

![Reading Achievement, Site D](image)

*Figure G9: Reading Achievement, Site D*

53. Is there a desired difference in Reading MAP test scores at Site E?

![Reading Achievement, Site E](image)

*Figure G10: Reading Achievement, Site E*
55. Is there a desired difference in Combined MAP test scores at Site A?

![Combined Achievement, Site A](image1)

*Figure G11: Combined Achievement, Site A*

56. Is there a desired difference in Combined MAP test scores at Site B?

![Combined Achievement, Site B](image2)

*Figure G12: Combined Achievement, Site B*

57. Is there a desired difference in Combined MAP test scores at Site C?

![Combined Achievement, Site C](image3)

*Figure G13: Combined Achievement, Site C*
58. Is there a desired difference in Combined MAP test scores at Site D?

![Combined Achievement, Site D](image)

*Figure G14: Combined Achievement, Site D*

59. Is there a desired difference in Combined MAP test scores at Site E?

![Combined Achievement, Site E](image)

*Figure G15: Combined Achievement, Site E*
Appendix J – SIP Walk-Through Form

SIP WALK-THROUGH FORM

SIP Team Member: ____________________ Date: ____________________

Observer: ____________________

Based on your observations, please rate the following by making a mark on the scales below.

10 = Exemplary, evident throughout the observation
0  = Missing, not evident

1. Positive Feedback to Students

0 __________________________________________ 10

2. Staff Voice Tone

0 __________________________________________ 10

3. Staff Managing Emotions

0 __________________________________________ 10

4. Students engaged and working

0 __________________________________________ 10

5. Paperwork Maintenance

0 __________________________________________ 10

6. Staff Following Program/protocol

0 __________________________________________ 10

7. Point Sheet Marked Every Five Minutes

0 __________________________________________ 10

8. Level of Instruction

0 __________________________________________ 10
The Office of Human Research Protection has reviewed the scope of work for the above referenced project, and determined that it does not require human research protection oversight by this institution.

**Project Summary**

This study involves an evaluation of the Comprehensive Student and Staff Support (CSSS) program at WCSD. The program is being piloted in the elementary grades with students who have emotional and behavioral disabilities. The analysis will be conducted using existing (on-the-shelf) data at WCSD which will be completely de-identified when provided to the researchers. This has been agreed to in writing by the researchers and WCSD.

The regulations at 45 CFR 46.102(d) state: “Research means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.”

The regulations at 45 CFR 46.102(f) state: “Human subject means a living individual about whom an investigator (whether professional or student) conducting research obtains (1) Data through intervention or interaction with the individual, or (2) Identifiable private information.”

Your project as summarized above does not involve human subjects as defined in the regulations. Therefore, you do not need IRB approval.

If additional information is necessary, please contact the Office of Human Subjects Research at 775.327.2368.
Research Request Approval

March 12, 2012

Name of Proposed Study: A program evaluation study of the comprehensive student and staff support (CSSS) System in the Washoe County School District of Nevada

Affiliation: WCSD/UNR

Principal Investigators: Michael Perrin

1. The Principal Investigator submits a detailed study protocol to the WCSD Department of Accountability before collecting any data.

2. The Principal Investigator agrees to contract with a WCSD Department of Accountability staff member to extract, compile, match and de-identify data from the student information system on a voluntary basis, outside of normal work hours. The volunteer staff member will provide the Principal Investigator with a fully de-identified dataset free from all student identifiers, including student number, name, date of birth, residential or mailing address, and any other data point that would allow a student to be individually identified.

3. Student, teacher, and administrator anonymity shall be assured in the research project. The identity of students, teachers, administrators, and schools shall not be revealed in the report of the study.

4. The results of the study shall not be used for any purpose other than that specified in the research request, except by written permission of this office.

5. A copy of the report of the study shall be filed with this office and with the principal of any school that has participated in the study.

6. The study must conform to the federal Family Education Rights and Privacy Act (FERPA), all federal regulations dealing with Protection of Human Subjects and the Washoe County School District Board Policies pertaining to student information.

Approval to conduct this study within the Washoe County School District expires:

March 11, 2013