Implementing Social and Emotional Learning in Rural Colorado Schools: A Quantitative Study of the Impact of Impetuses and Challenges

Jimmie Robert Charles Phillips

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IMPLEMENTING SOCIAL AND EMOTIONAL LEARNING IN RURAL COLORADO SCHOOLS: A QUANTITATIVE STUDY OF THE IMPACT OF IMPETUSES AND CHALLENGES
A Dissertation Submitted in Partial Fulfillment
for the Requirements for the Degree of
Doctor of Education

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ABSTRACT


The purpose of this study was to identify the circumstances of rural Colorado schools that impact SEL implementation. The research also sought to determine the relationship between impetus for implementation and levels of achieved implementation as well as the relationship between implementation challenges and achieved levels of implementation.

A survey of 113 school leaders provided data about these relationships. The findings supported current literature about the difficulties of implementing SEL and about rural school challenges in general. The results indicate that leaders who observed best practices in SEL at the building-wide and classroom level also rated themselves as having higher levels of implementation. Reasons for SEL implementation that rated the highest were those closest to the interests of students while outside influences rated lower. Schools with higher levels of implementation in general rated challenges low. This study has affirmed the need to further research to define the impact of challenges and impetus in rural settings, particularly for schools currently choosing not to implement SEL at the time of the survey.
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CHAPTER I

INTRODUCTION

Education has seen an “explosion of interest” in recent years in social and emotional learning (SEL) for youth in schools and communities (Weissberg, Durlak, Domitrovich, & Gullotta, 2015, p. 3). Research, policy, and practice all have seen growth around programming for SEL (Weissberg et al., 2015; Zaslow, Mackintosh, Mancoll, & Mandell, 2015). Consistent results from controlled studies indicate that SEL improves attitudes and skills, reduces negative behavior and can increase academic performance (Mahoney, Durlak, & Weissberg, 2018; Payton et al., 2008). SEL, when broadly defined, is the acquisition of skills that involves interpersonal (interacting with others) and intrapersonal (managing oneself) functions (Pellegrino & Hilton, 2012). Interest in SEL is seen as a possible means of addressing the achievement gap that has persisted throughout the accountability era (Darling-Hammond, 2015; Durlak, 2015; Goleman, 2015; Payton et al., 2008; Shriver & Buffett, 2015).

The era of interest in SEL was initiated by the No Child Left Behind Act of 2001 (NCLB) for K-12 public schools (Thomas & Brady, 2005). The intent of NCLB was that every American student would be proficient in reading, writing, and mathematics by 2014, a goal that was not realized. However, Dee and Jacob (2011) found that NCLB generated statistically significant increases in mathematics for fourth and eighth grade students, particularly for traditionally low-achieving students. The Every Student Succeeds Act of 2015 (ESSA), which replaced NCLB, shifted more control to states but
maintained the requirement of annual standardized testing, effectively maintaining the accountability path in American education policy.

During this era of academic standardized testing, Colorado’s achievement gaps persist, and less than half of its students are proficient or above in math or reading on national assessments (Colorado Department of Education, 2016). When disaggregated by Colorado school district size, trends are revealed for urban, suburban, town, and small rural districts. In 2011, 2013, and 2015, grades four and eight were tested. For urban and suburban students, math and reading proficiency levels did not increase from 2013 to 2015—with the exception of eighth grade reading in urban districts which rose from 33% proficient or above to 35% proficient or above. For town and rural districts, there is a downward trend in all areas from 2013 to 2015—with the exception of a one-point increase in fourth grade reading (CDE, 2016).

Reform attempts of the last 50 years have not put social and emotional factors in learning at the core of discussions (Shriver & Buffett, 2015, p. xv). However, to close achievement gaps and increase overall student proficiencies, recent efforts in K-12 education have focused on leveraging the affective domain in teaching and learning (Immordino-Yang, 2015; Mart, Weissberg, & Kendziora, 2015). Current researchers asserted that attending to affective development may be necessary before schools can rise to the challenge of educating all students (Elias et al., 2015; Pellegrino & Hilton, 2012; Weissberg et al., 2015). Additionally, researchers argued that all students should not only have access to appropriate social and emotional education, and it is systemically possible to achieve this imperative (Mart et al., 2015). Mahoney et al. (2018) found that “current
data indicate that SEL programs are both feasible and effective in a variety of educational contexts in many countries around the world” (p. 8).

In addition to the potential for improving academic achievement, SEL can help others raising and educating today’s youth. Educators, families, and community members all share the common desire to raise children who are knowledgeable, responsible, caring, and socially competent (Elias et al., 2015). Ultimately, the goal is for all students to become positive family members, neighbors, contributing citizens, and productive workers. To achieve this, they need to develop work habits and dispositions that prepare them for higher education, careers, and life success (Elias et al., 1997; Elias et al., 2015; Weissberg et al., 2015). Put succinctly, self-regulation and self-regulated learning are manifestly important for academic achievement as well as overall lifetime success (Blair & Raver, 2015).

As educators and policy makers attempt to address these state assessment gaps through affective approaches, the use of SEL as programming in schools becomes an important area of emphasis in education. Questions about social and emotional competencies and their impact on student success have served as a dominant recent research focus (O’Conner, De Feyter, Carr, Luo, & Romm, 2017). The reported improvement in student behavioral and academic outcomes resulting from SEL instruction continues to generate a great deal of interest in maximizing the potential of SEL in schools. Interest in the topic is further stimulated by school districts describing significant success in student outcomes through use of well-implemented, evidence-based SEL programming (Collaborative for Academic, Social, and Emotional Learning [CASEL], 2017; D. C. Meyers, Domitrovich, Dissi, Trejo, & Greenberg, 2019). These
kinds of claims and inquiries have led to further development of school-based services that use SEL strategies, strategies that are intended to maximize student potential for school success and success later in life (CASEL, 2017).

**Contending with Student Behavior**

A reduction in negative student behavior can result in a more efficient classroom. Efficient classroom management enables teachers to spend more time on instruction than addressing discipline. An increase in time for instruction is positively related to better student achievement (Wang, Haertel, & Walberg, 1993), but negative student behaviors and a school’s inability to manage them is also tied to schools’ inability to retain teachers (Phillips, 2015; Riggs, 2013). In spite of positive outcomes for schools utilizing SEL approaches, many schools do not use SEL programming, and negative student conduct and its impact on schools remains a significant problem (Steinberg & Lacoe, 2017).

SEL is being looked to as a way to decrease negative student behaviors and, ultimately, positively impact student achievement (Darling-Hammond, 2015; Durlak, 2015; Weissberg et al., 2015). At the classroom level, SEL has long been believed to be an effective preventative measure for negative behavior (Goleman, 2015). But to achieve academic and behavioral objectives, traditional classroom practices need to be replaced with SEL approaches (Kohn, 1999; Reeves, 2011; Smith, Fisher, & Frey, 2015). Without relinquishing traditional practices to change student behavior, undesirable outcomes will continue, and implementation will be more difficult (Durlak, 2015; S. M. Jones & Bouffard, 2012; Reeves, 2002).

Students who lack the ability to self-manage their emotions and learning often create disruptions in the learning environment, and these deficits lower their academic
performance (Benson, 2006; Mueller, 2008). Educator responses are often required to correct or mitigate these behaviors. In terms of responses, traditional punitive disciplinary practices are still widely used (Bear, Whitcomb, Elias, & Blank, 2015; Okonofua, Paunesku, & Walton, 2016; Steinberg & Lacoe, 2017). At the classroom level, students are given detentions, grades are sometimes decreased, and students are often denied instruction—all as attempts to provide disincentives to negative behavior (Kohn, 1999; Reeves, 2002; Smith et al., 2015). At the administrative level, in-school and out-of-school suspensions are still widely used in spite of growing evidence that suggests that excluding students from class does little to improve a school population’s academic achievement levels (Chmelynski, 2005; K. Evans & Vaandering, 2016; Reeves, 2002, 2011; Smith et al., 2015).

Adolescent behavior continues to be an issue in school and out of school as well (Steinberg & Lacoe, 2017). The Centers for Disease Control (CDC) survey of high school students indicated that criminal and other risky behaviors remain a significant issue. For instance, students surveyed are not wearing seat belts or bicycle helmets. They are texting while driving, drinking alcohol, riding with drivers that have been drinking alcohol, or driving while drinking. They are bullying, carrying weapons, even carrying guns on school property, getting in fights, and sometimes avoiding campus for fear of their safety. They are having unprotected sex, even after receiving HIV/AIDS education, and often doing so after drinking or using drugs. They are engaging in dating violence and rape. They use and sell hard drugs and medication not prescribed to them. They prefer soda over healthier drinks, engage in too much screen time, do not get enough sleep, and do not exercise regularly (pp. 5-45). SEL programming has been shown by
research to reduce risky, out-of-school behaviors (Gullotta, 2015; Tolan, Nichols, & DuVal, 2015).

Furthermore, policy makers have a long-standing interest in ending the so-called “school to prison pipeline” (Steinberg & Lacoe, 2017; Wald & Losen, 2003). This is a trend that is often associated with the perception of public schools’ ineffectiveness in dealing with behavior issues that result in a high cost to society (Belfield et al., 2015; D. E. Jones, Greenberg, & Crowley, 2015). Belfield et al. (2015) found that the benefits of SEL programming outweigh the costs by a ratio of 11:1.

**States’ Implementation Efforts**

State departments of education have published materials to guide SEL implementation efforts in their respective states. CASEL identified states that have accomplished SEL progress in regard to identifying standards, recommendations, and guiding principles that guide implementation efforts (Dusenbury, Dermody, & Weissberg, 2018; Dusenbury & Weissberg, 2018). Many states have identified and adopted SEL instructional programs (“CSI Resources: Frameworks and Competencies,” 2018). States such as Massachusetts, Minnesota, and New York each have published their own guidelines for implementing SEL in their states (“CSI Resources: Implementation,” 2018). California and Wisconsin have developed processes and recommendations for communicating a vision for SEL in their approach to defining SEL competencies and guidelines (“CSI Resources: Vision and Communication,” 2018).

By 2015, all 50 states had preschool competencies for SEL, seven states had Pre-K and early elementary competencies, and four states had K-12 competencies. By the end of 2017, at least eight states had articulated SEL competencies through 12th grade.
Sixteen states had posted guidance related to either SEL standards or learning objectives or both (“CSI Resources: Frameworks and Competencies,” 2018). Colorado is one of the 16 states with web pages providing guidance for school SEL efforts. Currently, the CDE does not mandate SEL instruction. Policies are in place in Colorado that reflect mandated responses to discipline and bullying issues. However, there is neither legislation nor CDE mandates requiring preventative instructional programs that reflect the comprehensive purposes of SEL.

At least 16 states have developed web pages to share K-12 resources on SEL, including resources to support implementation. It is projected that by the end of 2019 at least 16 states will have articulated SEL competencies through 12th grade (Dusenbury et al., 2018). The momentum nationwide seems to be growing. As of 2018, Weissberg declared, “There is definitely more interest in SEL since 2015” (R. P. Weissberg, personal communication, July 28, 2018). State publications reveal recommended practices and highlight successful outcomes for some districts in a variety of settings. Descriptions of any accompanying challenges are not a part of those publications, yet challenges do accompany school SEL implementation efforts. The lack of research on SEL implementation challenges is an area where more research is needed (Durlak, 2015).

**Problematic Implementation**

Despite promises and progress of SEL in school settings, there is considerable concern and scrutiny noted in educational literature about the perceived effectiveness of the implementation of SEL in schools (Durlak, 2015; S. M. Jones & Bouffard, 2012). The implementation aspects of SEL programming efforts have been described as “informal and haphazard” (Elias et al., 2015, p. 33), “fragmented fads,” and “short-term, piecemeal,
pilot programs that are not well integrated into the academic mission of schools” (Weissberg et al., 2015, pp. 5, 11).

In spite of the earlier brief assessment of the current confidence in SEL’s effectiveness, many states have not implemented SEL programming to address the problem of negative student behavior that persists. With the recent articulation of successful SEL strategies and implementation factors, learning about implementation efforts may serve to inform educational policies. In the context of effective implementation, more empirical data are needed regarding quality of delivery, “active ingredients of interventions,” professional development, and ecological factors (Durlak, 2015, pp. 396-403).

Dusenbury and Weissberg (2017) concluded that implementation is being complicated by unnecessarily complex standards with some districts attempting to meet more than 500 benchmarks for a single grade level (p. 4). In addition, O’Conner et al. (2017) found that very few studies reported data on implementation, and even fewer connected implementation data associated with outcomes. Given the variety of standards being implemented and the variety in strategic planning from school to school, much more could be learned. A greater understanding of best practices for implementation and associated outcomes would enable educational leaders currently implementing SEL standards in their state to inform future implementation efforts and state policy making.

S. M. Jones and Bouffard (2012) examined policies related to SEL programming. They cited a lack of data in this field that needs to be gathered. They recommended that next steps for SEL implementation should include collaboration between families,
schools, and community agencies to combine expertise and supports as SEL is implemented (p. 20).

**Rural Challenges**

It is noteworthy that none of the state SEL publications refer to outcomes or challenges specific to rural schools which is of interest in the proposed study. Nor do the publications provide reasons why any specific district chose to attempt SEL implementation. The word “rural” appears only in tables referencing previous research to indicate if the settings for the study included rural sites.

Regardless of the inattention in state publications, rural school districts have long faced multiple challenges in their efforts to improve learning in their schools (Culbertson & Billig, 2016). Many of these are logistical challenges. Some are related to culture, but the source of most of the challenges can be traced to resource shortfalls (Bryant, 2007). Rural districts struggle to recruit and retain high quality teachers as well as counselors and health care providers (Best & Cohen, 2014; Brenner, 2016; Bryant, 2007; Culbertson & Billig, 2016; A. B. Meyers, Tobin, Huber, Conway, & Shelvin, 2015). Mandates, more often than not, plague rural schools (Bryant, 2007). The rural communities themselves often are experiencing poor economies (Bryant, 2007; Culbertson & Billig, 2016; Mueller, 2008; San Antonio, 2018; Wimberly & Brickman, 2014). Internet connectivity and technology updates and upgrades are more difficult to maintain (Best & Cohen, 2014). Accessing other resources can be difficult for rural districts as well, including transportation, childcare, professional development opportunities, and exposure to fine arts (Ashton & Duncan, 2012; Best & Cohen, 2014; Brenner, 2016; Bryant, 2007;
 Challenges for rural districts will be explored further in Chapter II.

The Role of Impetus in Implementation

As previously noted, implementation of SEL in schools is not mandated, and therefore the motivations behind SEL implementation are not a result of requirements of law. What reasons, then, might a school district’s leaders have to implement this endeavor? Although the obvious altruistic answer is that “It’s good for kids,” many endeavors benefit students, so why does the SEL movement seem to have taken a higher priority? Reasons may include superintendent mandates, pressure from other community agencies, or simply pressure to match other school districts’ perceived progress (Cialdini, 1993; Durlak, 2015).

Could the exposure to the current SEL movement in educator magazines, at conferences, and in the news cause leaders to implement SEL for fear their students (or the leaders’ reputations) may be at a disadvantage compared to other schools if SEL is not implemented? Cialdini (1993) articulated the principle of social proof that may play a role here:

> Whether the question is what to do with an empty popcorn box in a movie theater, how fast to drive on a certain stretch of highway, or how to eat the chicken at a dinner party, the actions of those around us will be important in defining the answer. (Cialdini, 1993, p. 88)

Whether the principle of social proof is in play or not, it is clear that impetus does indeed have an important ecological role in quality implementation (Durlak, 2015). The impact of ecological factors related to impetus in implementation will be explored further in Chapter II.
**Problem Statement**

Based on the above discussion, it is possible to identify a problem that will serve as a starting point for investigation for this proposed study. Achievement gaps continue to vex American schools, and part of the blame is attributed to failed social policies (Gándara & Contreras, 2009). SEL has been known to improve academic and non-academic deficits and is becoming part of policy and practice in many states (Darling-Hammond, 2015; Durlak, 2015; Dusenbury et al., 2018; Weissberg et al., 2015). The implementation of SEL in schools comes with many and diverse challenges (Durlak, 2015; Dusenbury & Weissberg, 2016; Mart et al., 2015).

**Purpose Statement**

The purpose of this the study was to determine correlations between implementation reasons, challenges, and levels of implementation of SEL programming as reported by Colorado rural school administrators or other personnel assigned to monitoring building-wide SEL efforts.

The study focused on four objectives:

1. To identify the circumstances in rural Colorado schools that impact SEL implementation efforts.
2. To identify SEL implementation efforts and challenges as reported by Colorado rural school leaders.
3. To identify the impetuses for implementation of SEL in rural Colorado schools as reported by Colorado rural school leaders.
4. To determine if the identified challenges or impetuses can predict levels of SEL implementation.
Research Questions

Q1 Do implementation challenges identified by rural Colorado school leaders predict levels of implementation?

Q2 Do the impetuses identified by rural Colorado school leaders for implementing SEL predict levels of implementation?

Significance of the Study

Overall, insights gained from the proposed research study could add to the body of evidence about educators’ understanding of SEL implementation levels and efforts. Responses from school leaders in rural Colorado may further define the challenge of providing SEL programming in rural settings. Given the concern of previous researchers about implementation gaps (Durlak, 2015), the first-hand information gathered from school leaders about their chosen types of SEL instruction may inform future implementations and policies. Without knowing what SEL implementation “looks like” in rural Colorado schools and having no data regarding what impetus triggered the implementation of SEL programs, it is clear there is more that should be explored to inform policy makers about what rural SEL implementations do look like and should look like.

Rural schools, specifically, can benefit from research that reveals best practice. Schools often are allowed only one opportunity to implement an initiative effectively (Durlak, 2015). It would be beneficial for Colorado rural schools proceed with SEL implementations with the best understanding of best practices. With better SEL implementation and use, academic and non-academic outcomes could improve for students. Additionally, school leaders’ clarity or ambiguity around identifying the
impetus for implementation may tell a story to inform future leadership studies and preparation.

**Definition of Key Terms**

**Colorado Rural School District.** A Colorado school district is determined to be rural with consideration to the size of the district, the distance from the nearest large urban/urbanized area and has a student enrollment of 6,500 students or less. “Small rural” districts are those districts meeting these same criteria and having a student population of less than 1,000 students. There are 108 districts meeting the “small rural” criteria with a combined total of 36,347 students. Another 40 districts are considered “rural” with a combined total of 96,347 students, which totals 132,694 students in Colorado potentially impacted by implementation difficulties or the lack of direction or understanding of the task (CDE, 2018b).

**Four components that determine levels of implementation.** Instruction that has:

1. Free-standing lessons designed to enhance students’ social and emotional competence explicitly
2. Teaching practices such as cooperative learning and project-based learning, which specifically promote SEL
3. Integration of SEL and academic curriculum such as language arts, math, social studies, or health
4. Organizational strategies that promote SEL as a school-wide initiative that creates a climate and culture conducive to learning. (CASEL, 2017)

**Implementation.** Implementation refers to what a program consists of when it is delivered in a particular setting. Important aspects include fidelity, dosage,
quality, participant responsiveness, program differentiation, monitoring conditions, program reach, and adaptation (Durlak & DuPre, 2008, p. 329).

**Implementation Impetus.** The overall motivation and incentive in place when a school faces the implementation of a new initiative (Durlak, 2015). Implementation reasons refer to the discrete examples identified in literature and by respondents in the study.

**Implementation Challenges.** The obstacles faced by educators attempting to execute steps for an educational initiative (Durlak, 2015)

**School leaders.** For the context of this study, a building leader is any school district leader working at the school building-level responsible for the implementation and oversight of SEL instruction. Although typically the principal or assistant principal, this person may be titled as a coordinator, chairperson, counselor, or other designated member of the building administrative team or district-level team (Bambrick-Santoyo, 2012).

**Social and Emotional Learning (SEL).** According to Weissberg et al. (2015), the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to:

- understand and manage emotions,
- set and achieve positive goals,
- feel and show empathy for others, and
- Establish and maintain positive relationships
- make responsible decisions.
Summary

Instruction in the area of SEL shows great promise in the personal development of youth and the improvement of academic success for students (Weissberg et al., 2015). Implementation of any educational initiative is challenging, and SEL continues to generate research interest and receive attention as both a preventative measure and remedy (Durlak, 2015; Weissberg et al., 2015). Goleman (2015) asserted that there is no need for development of new systems around this topic. What is required is to integrate systems learning approaches with SEL to give youths the toolkit needed to solve the world’s problems (p. 595). To meet this goal, more discovery is needed in this area of research (Weissberg et al., 2015).

Rural school leaders too require toolkits for initiatives like SEL programming (Ashton & Duncan, 2012). However, in the rural context, educators’ isolation from professional development and those engaging in empirical research puts them at a disadvantage (Arnold, Newman, Gaddy, & Dean, 2005; Ashton & Duncan, 2012; Crockett & Bingham, 2000; A. B. Meyers et al., 2015; San Antonio, 2018). Even extracting student test scores and providing data for action research comes with great difficulty in rural districts where human resources and administrators’ time is already stretched thin (Schimel, 2014). With limited ability to find answers themselves due to economic and human resource restrictions, more identification of promising policies and practices from rural schools currently closing achievement gaps is needed (Culbertson & Billig, 2016). The policies that result from research should be informed by practice and/or evidence-based research from rural schools (Best & Cohen, 2014).
Further, limited documentation exists that reflects school leaders’ assessment of their implementation efforts, particularly in the area of SEL. Further, there seems to be limited understanding regarding why and when implementations took place in rural settings. In other states, limited empirical research exists about this group of educators regarding SEL, according to a representative of CASEL: “At this time, I do not know of any literature that explores rural school settings and challenges” in relation to the implementation of SEL (B. Lectura, personal communication, June 6, 2018). Efforts in other states will be explored further in Chapter II.

The proposed study is intended to fill gaps in what is not known about the implementation of SEL in Colorado rural schools. Rural Colorado leaders themselves are geographically dispersed throughout the state and certainly not centrally located for efficient study by a single researcher. Survey design research using an online platform is well suited for this study regarding both accessibility and purpose. The data and findings from the proposed study could serve not only to inform policy at the state and district level but also could serve to provide the participants themselves information about those in similar professional situations.
CHAPTER II
LITERATURE REVIEW

In this literature review, I will explore several aspects of the proposed study’s problem with the intent of building an argument that SEL is necessary for adolescents, belongs in schools, and is typically implemented inadequately. Further, the challenges for rural schools and communities need attention, especially regarding their current efforts to implement SEL in rural schools. The proposed study could contribute to filling gaps in the literature regarding rural school implementation of SEL.

First, I will explore the circumstances that have led to an increased interest in SEL programming in the U.S. This will include a description of the prevalence of problematic adolescent behaviors and data that illustrate a need for improvement. I will analyze influences on learning as well as SEL’s effects on students and their academics and general wellness. To better communicate the context for current educational thought, I will explore the origins of intelligence theories, political actions, and popular movements that led to today’s interest in SEL in education in the United States. These factors provide the context for understanding educator paradigms regarding this change and implementation (Durlak, 2015).

Student motivation and engagement are central to SEL success, so I have included movements in education around the topic of intelligence theory that have impacted the progress that led to mainstream acceptance of SEL in education. Research in the areas of metacognition, executive functioning, and other brain research all have
played important roles in the design of SEL programming (Immordino-Yang, Darling-Hammond, & Krone, 2018). The body of evidence from these fields suggests that SEL should be central to school instruction (Bierman & Motamedi, 2015; Darling-Hammond, 2015; Goleman, 2015; Shriver & Buffett, 2015; Weissberg et al., 2015), an ever-increasing body of knowledge supports the use SEL in schools as both a preventative measure and remedy (Bear et al., 2015; Conley, 2015; Elias et al., 2015; Fagan, Hawkins, & Shapiro, 2015; Jagers, Harris, & Skoog, 2015; Mart et al., 2015; Price, 2015; Tolan et al., 2015; Williamson, Modecki, & Guerra, 2015).

Finally, I will explore issues related to implementation, with particular attention to implementing SEL programming in rural school districts. Implementation continues to vex school systems in general (Durlak, 2015; Low, Smolkowski, & Cook, 2016), and rural schools face their own set of challenges in implementation (Ashton & Duncan, 2012; Best & Cohen, 2014; Brenner, 2016; Bryant, 2007; Crockett & Bingham, 2000; Culbertson & Billig, 2016; A. B. Meyers et al., 2015; San Antonio, 2018) and closing achievement gaps (Culbertson & Billig, 2016). Evidence of the SEL implementation difficulties for Colorado rural schools, which is the focus of the study, will be considered as well.

**Impetus for Social-Emotional Learning**

Although recent efforts in the SEL movement are gaining widespread attention (Weissberg et al., 2015), the affective domain in education has a long history. (Bloom & Committee of College and University Examiners, 1964) and Krathwohl, Bloom, and Masia (1973) developed an articulation of this domain of learning which attends to the manner which humans deal with emotions. A return to the importance of this early
research signals a shift in the balance between cognitive and affective outcomes for young people. At the very least, there is broad agreement that academic instruction alone is not enough to raise knowledgeable, socially competent children (Maslow, 1943; Pellegrino & Hilton, 2012; Weissberg et al., 2015).

SEL is rooted in many sociological theories. Social learning theory is especially relevant for SEL program design. Social learning theory posits that the acquisition of new behavior is influenced by social interactions, role modeling, verbal instruction, and supervised feedback and support (Brackett, Elbertson, & Rivers, 2015). SEL programming in school settings, then, naturally depends on educators for successful implementation (Brackett et al., 2015).

Since social development theory posits that children learn from their social environments. How they interact with other people, whether in antisocial or prosocial patterns, influences how they interact in and out of school (Catalano & Hawkins, 1996, p. 156). Social cognitive theory also asserts that an individual will choose a new behavior if it leads to a desired outcome (Bandura & National Institute of Mental Health, 1986). The more the individual values the outcome, the more likely the behavior change is to occur (Brackett et al., 2015). Grounded in these social theories, SEL largely evolved from research on resilience and prevention and from the interest generated by conceptual frameworks of the 1990s.

The concept of SEL represented a blend of ideas from educators, community service providers, and others interested in the health needs of children (Elias et al., 1997). Around the same time, educational reform attempts had been evolving because of public outcry following a poor evaluation of American education (Gándara & Contreras, 2009).
The CASEL (2012) identified five areas where youths’ capacity should be enhanced: self-awareness, self-management, social awareness, relationship skills, and responsible decision making. These competencies will be more fully defined later in this chapter.

A Call for Action

*A Nation at Risk* (Goldberg & Harvey, 1983) revealed to the public the mediocre performance of American public school students compared to schools worldwide. The report stated, “if an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war” (Goldberg & Harvey, 1983, p. 113). The report gained immediate, widespread media attention and created an urgent challenge for American educational institutions (Gándara & Contreras, 2009).

The report’s recommendations largely addressed the standardized testing deficits in math and other cognitive-based subjects and tasks. The recommendation that schools should “foster an enthusiasm for learning” did not include extended references to the affective domain of learning (Goldberg & Harvey, 1983, p. 72). The lack of attention to psychological influences on learning set back educational progress in this area and pointed research and policy toward a fixation with standardized test results (Dulfer, Polesel, & Rice, 2012; Klenowski & Wyatt-Smith, 2012; Yeh, 2005).

The No Child Left Behind Act of 2001 (NCLB) for K-12 public schools was designed with the intention to have every American student proficient in reading, writing, and mathematics by 2014, a goal that was not realized. Dee and Jacob (2011) found that NCLB generated statistically significant increases in mathematics for fourth and eighth grade students, particularly for traditionally low-achieving students. The ESSA (2015)
maintained the accountability path in American educational policies. It replaced NCLB and allowed more state control, but it did keep in place the requirement of annual standardized testing.

**Adolescent Problem Behavior**

In addition to concerns over lackluster academic performance by American students, annual national survey results consistently report youths, especially older adolescents, engaging in some sort of problem behavior (Williamson et al., 2015). This continues to be a concern for schools and communities. “In most modern technological societies, citizens and policy makers are concerned about the extent to which today’s children and youth experience suboptimal academic achievement, high rates of early substance use, and intolerable exposure to violence (D. E. Jones et al., 2015, p. 97).

The National Center for Educational Statistics (NCES) reported school survey results on crime, violence, discipline, and safety that include nationwide respondents. Trends can be identified in selected findings that are common to both the 2009-2010 school year and the 2015-2016 school year. A comparison of the two time periods’ NCES reports indicated decline in some areas, yet incidents of violence and discipline continued to be noted. During the 2009-10 school year, the reported rate of violence per 1,000 students in middle schools was higher (40 incidents) than in elementary and high schools (21 incidents each; Neiman, 2011, p. 3). During the 2015-16 school year, middle schools report 27 incidents, high schools 16, and primary schools 15 (Diliberti, Jackson, & Kemp, 2017). During the 2015–16 school year, 37% of disciplinary actions taken by schools in response to student involvement in the use or possession of a weapon other than a firearm or explosive device involved an out-of-school suspension of students lasting five or more
days. In comparison, 18% of disciplinary actions involved the transfer of students to specialized schools, 4% of disciplinary actions involved the removal of students with no continuing services for at least the remainder of the school year, and 41% of disciplinary actions were classified as other (suspensions for less than five days, detention, etc.; Diliberti et al., 2017, p. 3). In 2009-10, for students involved in the use or possession of a weapon other than a firearm or explosive device at school, 40% of students received out-of-school suspensions lasting five or more days, 36% of students received other disciplinary actions (e.g., suspensions for less than five days, detention, etc.), 19% of students received transfers to specialized schools, and 6% of students received removals with no continuing services for at least the remainder of the school year (Neiman, 2011). In 2015-16, a higher percentage of middle schools reported that student bullying occurred at school daily or at least once a week (22%) than did high schools (15%) or primary schools (8%) (Diliberti et al., 2017). In 2009-2010, a higher percentage of middle schools reported that student bullying occurred at school daily or at least once a week (39%) than did high schools or primary schools (20% each; Diliberti et al., 2017).

Digital media also provide opportunities that contribute to problematic adolescent behavior (Chassiakos, Radesky, Christakis, Moreno, & Cross, 2016). Early use onset creates a greater cumulation of hours spent engaged with media. The large number of hours, combined with poor quality media that is poor quality are significant predictors of poor executive functioning and self-regulation in preschoolers (Nathanson, Sharp, Aladé, Rasmussen, & Christy, 2013). Social media, in particular, can impact adolescents negatively. Adolescent self-esteem is impacted negatively in friend networking (Valkenburg, Peter, & Schouten, 2006). Also, sexual behavior, substance use, eating
disorders, academic difficulties, and aggression all can be impacted negatively by social media (Strasburger, Jordan, & Donnerstein, 2010). Youths’ physical safety, psychological well-being, social development, and academic performance are areas of great concerns for their impact on user behavior (Ahn, 2011; J. D. Brown & Bobkowski, 2011; Spada & Marino, 2017).

A survey conducted from September 2014 to December 2015 by the CDC illustrated a continued prevalence of problem behaviors for students grades 9 through 12. Results from the survey, the National Youth Risk Survey, indicated that many high school students engaged in risky behaviors that are associated with the leading causes of death in the United States for people ages 10-24. The Youth Risk Behavior Surveillance System (YRBSS) monitors priority health behaviors of youth and young adults. Deficits in competencies defined by CASEL (2012), especially the competency “responsible decision-making,” are often associated with the risky behaviors that were surveyed. The surveyed behaviors are those that contribute to unintentional injuries and violence; tobacco, alcohol and drug use; sexual behaviors related to sexually transmitted infections or unintended pregnancies; unhealthy dietary behaviors; and physical inactivity (Kahn et al., 2016).

The authors disaggregated data to generate over 100 noteworthy observations, and the variation in 15 responses across states and settings were 25% or larger (Kahn et al., 2016, p. 49). Data recorded by YRBSS data tracked trends as long as 24 years for some behaviors. The authors noted decreases in some long-term trends for certain population and increases in others, but the 2015 data are consistent with past survey results in showing that risky behaviors are still prevalent.
Both the NCES data and YRBBS data have limitations. Among them are that NCES data do not include any incidents that school administrators were not aware of or chose not to report. The YRBBS data represent high school students and not elementary or middle school youths. However, the trends noted in both data sets provide a picture, a landscape of the state of affairs in the United States, that not all young people are reaching high levels of academic achievement nor making good decisions related to their personal health and safety. These outcomes have a negative impact on both the economy and culture. When social-emotional deficits are addressed, there often are benefits in those areas for communities and the larger society (Comer, 2015; Garibaldi, Ruddy, Kendziora, & Osher, 2015; Hecht & Shin, 2015; D. E. Jones, Crowley, & Greenberg, 2017; D. E. Jones et al., 2015; Redding & Walberg, 2015).

Educators use both incentives and disincentives to change student behavior. Students are rewarded in educators’ attempts to increase motivation, a practice known to have converse and sometimes perverse effects over time. They also are punished for negative behavior (Kohn, 1999; Reeves, 2002). In addition to punitive measures from teachers, exclusionary discipline practices used by administrators, such as suspension and expulsion, remain a substantial component of discipline in American schools (Skiba & Losen, 2016; Steinberg & Lacoe, 2017). The use of school exclusion as a disciplinary tool can have short- and long-term effects and has been associated with schools’ overall lower academic achievement (Davis & Jordan, 1994; Kohn, 1999; Rausch & Skiba, 2005). Over time, there is an increase of negative behaviors by students who have been subjected to exclusionary discipline (Tobin, Sugai, & Colvin, 1996).
Rausch and Skiba (2005) found that “Policies and practices that create more student removal from the opportunity to learn are more likely to create paradoxical detrimental effects on student learning” (p. 27). The results from the study provided “no support for the belief that suspension and expulsion positively affect school achievement, whether that be by removing sources of disruption from the learning environment or functioning as a deterrent for misbehavior” (p. 19). SEL, therefore, is a good remedy.

Further, schools with higher rates of suspension and expulsion had less satisfactory achievement outcomes (Rausch & Skiba, 2005). Traditional disciplinary measures such as expulsion and suspension address the externalized behavior but not the cause, which is often an unmet social and/or emotional need. The result for schools is sustained trends in crime and school discipline (Diliberti et al., 2017). Other detrimental effects of social-emotional deficits are substance abuse, bullying, risky sexual behavior, and mental health difficulties (Weissberg et al., 2015).

Rosa, Krueger, and Severson (2017) found that, of 90,838 disciplinary actions taken in a single year in Colorado, the most frequent were in- and out-of-school suspensions (p. 3). Infractions over time continued to be for defiance or disobedience, repeated interference of the learning environment, and behavior detrimental to the safety of others. Detrimental student behavior included threats to others with a weapon, hate crimes, bullying, and sexual harassment. Over-representation of Native American and Native Alaskan students and males in general continued to be a trend in disciplinary data (p. 22). The authors reported similar numbers for previous years. Expulsion had decreased in recent years, however, and this was attributed to state legislation that
required positive behavioral interventions and supports programs that support social-emotional wellness (p. 3).

Evolving Job Market

When I was growing up, my parents told me, ‘Finish your dinner. People in China and India are starving.’ I tell my daughters, ‘Finish your homework. People in India and China are starving for your job.’ (Thomas Friedman)

Fullan (2001) asserted that the moral purpose of education is to “. . . help produce citizens who can live and work productively in increasingly dynamically complex societies” (p.4). Kivunja (2014) concluded that, to meet Fullan’s moral imperative and ensure workplace readiness, students need to be able to think for themselves, solve problems, work in teams, and lead others to success in the “Knowledge Economy.” How and what teachers teach will require a paradigm shift (p. 89).

Also, the changing demands of the job market present a challenge for educators that suggests they are preparing students for jobs that have not yet been invented. Both technical and so-called “soft skills” are in high demand in the job market (Hirsch, 2017). With greater job growth in technology and other sciences, there is a greater emphasis to find candidates with soft skills to go with their technical skills.

These skills include conflict resolution, initiative, productivity, resilience, strategic thinking, and teamwork. Also, workers will continue to need to communicate complex ideas, negotiate, and lead (Börner et al., 2018; Gibert, Tozer, & Westoby, 2017). Students will need to engage in SEL in areas such as self-management if they want to master these soft skills for the workplace.

In summary of the impetus for implementing SEL, the public called for improvement in our students’ academic outcomes. In response, educators cited negative
or disruptive or resistant student behavior as barriers to effectively educating many students (Glazer, 2018). Recently, however, with a better understanding of the brain, metacognition, and social and emotional deficits, the conversation has changed. Many educators have shifted their paradigm, seeing the social and emotional deficits manifest as unwillingness or disruptive behaviors which are actually signs of missing foundational pieces required for learning. With their new understand of SEL, instead of saying “Students won’t,” educators now are saying “Students can’t. . . yet!” (Brackett et al., 2015; Durlak, 2015; Jennings & Frank, 2015).

**Theoretical Support for Social-Emotional Learning**

The following sections discuss topics that have had significant influences on the field of education. The topic of each section appears in research literature through the year 2018. One of the earliest of these topics, restorative justice, is seen in literature from the 1970s. Other topics of study appear in the post-NCLB era. For example, brain research was paired with SEL in an educational research context.

**Multiple Intelligence Theory**

During the same year as the release of the *A Nation at Risk* report, Gardner (1983) theorized that intelligence existed in several sensory modalities rather than as a single ability. Gardner studied stroke victims as well as children’s cognitive development to conclude that strength in one area of performance did not reliably predict comparable strength in another area. He argued for a new understanding of intelligence based on eight requirements for an intelligence *modality* which established the premise that all children could have intelligences that are not traditionally measured (Gardner, 1983).
Gardner’s (1993) book *Multiple Intelligences: The Theory in Practice* created great interest in the public education realm. Often mistaken for learning “styles,” Gardner argued that people who have an affinity for specific intelligences use those intelligences in concert with others as they develop skills. Gardner’s articulation of a framework of seven categories of intelligences--logical-mathematical, linguistic, musical, spatial, bodily-kinesthetic, interpersonal, and intrapersonal-- grew “out of a conviction that standardized tests, with their almost exclusive stress on linguistic and logical skills, are limited” (Gardner & Hatch, 1989, p. 7). He asserted that each of these intelligences could exist independently of one another and that one is not required to possess logical intelligence (which is typically assessed by standardized tests) as a prerequisite for other intelligences.

Gardner’s framework received widespread attention, especially among gifted and talented educators and parents (Reis, 2001). His work was considered “precise examples of multifaceted, expanding and scholarly conceptualizations of intelligence and giftedness” (Reis, 2001, para. 3). While several of his identified intelligences--such as musical or spatial intelligence--are no longer included in the SEL conversation, two remain at the forefront--intrapersonal and interpersonal intelligence. Core components of intrapersonal intelligence is the ability to have “access to one’s own feelings and the ability to draw upon them to guide behavior” (Gardner & Hatch, 1989, p. 6). It also requires knowledge “of one’s own strengths, weaknesses, desires, and intelligences” (p. 6). Interpersonal intelligence are capacities that “discern and respond appropriately to moods, temperaments, motivations, and desires of other people” (p. 6). Gardner recommended that “We need to train children in the personal intelligences in school”
(Goleman, 1996, p. 42). The CASEL model for SEL, which serves as the primary reference for the study proposed here as discussed in Chapter III, reflects Gardner’s earlier work in two specific areas, that students should understand and manage emotions and feel and show empathy for others (Weissberg et al., 2015).

Building on Gardner’s original framework, Gardner and Hatch (1989) found that children could utilize a single intelligence largely independent of another and that relative weaknesses and strengths were uncovered during the performance of the participant (pp. 8-9). In a pilot test, 15 children were assessed on activities that demonstrated an aspect of each intelligence. These included drawing, singing, music perception, creative movement, social analysis, hypothesis testing, assembly, calculation and counting, and number and notational logic (p. 8). The participants did not perform at the same level for all activities which suggested they did have distinct intellectual profiles. Children were observed performing the activities while researchers assessed them using a five-point scale.

To determine if a performance on one activity was independent of other performances, researchers standardized each of the scores with a mean = 0 and standard deviation = 1 and performed Spearman rank-order correlations. Only the numbered activities proved significantly correlated. The small sample may have contributed to the absence of strong correlations (p. 8). A second study of 15 children by Gardner and Hatch (1989) found that some participants with similar demographics did perform poorly across many activities. The researchers attribute this outcome to small sample sizes.

Both studies lacked diversity in student ethnicity as participants were largely from an Anglo, middle-income population. The studies also did not account for the influence
of gender or age on outcomes. Further, at the time there was “little precedent for developing scoring systems that go beyond linguistic and logical criteria” (Gardner & Hatch, 1989, p. 9). The researchers concluded that more high-interest, familiar materials would need to be developed that may have influence on the child’s ability and willingness to participate.

Criticism by Morgan (1996) reflected typical criticism of Gardner’s theory. Regarding Gardner’s theory and the Gardner and Hatch (1989) study, Morgan asserted that the seven intelligences were cognitive styles rather than stand-alone constructs and that Gardner’s theory was fundamentally a redefinition and reframing of selected IQ factors. Regardless, Morgan acknowledged Gardner’s contribution to the field (p. 11).

Sternberg (1994) reported finding no empirical studies confirming Gardner’s theory. Despite the psychology field refuting Gardner’s claims, his theory changed how educators and parents thought about student’s intelligence and helped to directed educators’ focus toward what students can do rather than what they cannot (Reis, 2001). This paradigm shift was crucial in the prelude to SEL.

Goleman (1995) made popular the notion of viewing the experience and expression of emotions as a domain of intelligence. Crucial emotional competencies can be learned “if we bother to teach them” (pp. 34-35.) Since then, Goleman (2015) asserted that three innovations have evolved in SEL. “Breathing buddies” is a mindfulness activity where young children lie down and put a stuffed animal on their bellies that they watch while they breathe to promote calm and focus for the rest of the day (p. 594). The second area of innovation involves the teaching of skills related to empathy. Empathetic concern can be strengthened with the right training and should be included in SEL programming.
The third area for innovation is in the area of “systems learning.” Children need to learn to apply a “systems lens” to relationships, to families and schools, and to larger systems that regulate their lives. Goleman noted the need for children to address world problems such as the growing environmental crisis. “Systems learning can give them a vital toolkit for imaginative solutions” (Goleman, 1995, p. 595).

**Emotional Intelligence Theory**

Salovey and Mayer (1990) introduced the phrase “emotional intelligence” and presented an accompanying framework. They described emotional intelligence as:

A set of skills hypothesized to contribute to the accurate appraisal and expression of emotion in oneself and in others, the effective regulation of emotion in self and others, and the use of feelings to motivate, plan, and achieve in one’s life. (Salovey & Mayer, 1990, p. 185)

The definition expanded into five domains--knowing one’s emotions, managing emotions, motivating oneself, recognizing emotions in others, and handling relationships. In time it evolved into the following:

The capacity to reason about emotions, and use emotions to enhance thinking. It includes the ability to accurately perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and emotional knowledge, and to reflectively regulate emotional and intellectual growth. (Mayer & Salovey, 1997, p. 3)

Subsequent literature regarding emotional intelligence explored the validity and reliability of measures of emotional intelligence. Salovey, Mayer, and Caruso (2004) found that there was accumulating evidence which indicated that measured emotional intelligence does predict a variety of important outcomes. Further, better emotional intelligence translated to better academic performance while declining emotional intelligence correlated with a rise in “problem behaviors, deviance, and drug use” (pp. 209-210). The researchers acknowledged and agreed with criticism regarding self-report
scales. Certain self-report measures are measures of self-perceived emotional intelligence rather than true ability. These self-perceived measures are better viewed as personality assessments (pp. 210-211).

**Mindset Theory**

Dweck (2008) described the need for people to recognize that intelligence is not fixed and that a person can develop any type of intelligence. Dweck and Leggett (1988) found that underlying personality variables can translate into motivational processes to produce major patterns of cognition, affect, and behavior (p. 271). They began by documenting patterns of cognitive affect behavior that had profound effects on adaptive functioning. They then asked questions about the underlying motivational and personality variables that gave rise to these response patterns. They examined the role of learning and performance goals and the patterns produced. They then linked the goals to individuals’ implicit theories of their attributes (p. 270).

Dweck and Leggett’s (1988) research examined two major patterns of behavior in response to task completion. A pattern of helplessness was characterized by an avoidance of challenges and deterioration of performance when a person encountered obstacles in learning or doing. The other pattern, a mastery-oriented response, involved challenge-seeking and maintaining the ability to persist when engaging with learning or completing tasks. Performance goals and learning goals were found to generate different responses. Individuals attempting to meet performance goals to gain favorable judgment tended toward helplessness. When individuals focused on learning goals, they tended toward the mastery-oriented pattern (p. 256). The researchers concluded that, whereas helpless individuals appeared to view challenging problems as a threat to their self-esteem,
mastery-oriented individuals appeared to view them as opportunities for learning something new (pp. 258-259).

Dweck and Leggett’s work lacked tested models for this area of research. When researchers interviewed and observed the individuals, they recorded spontaneous responses to tasks. No model was used to determine positive comments compared to negative comments nor were common interview questions administered to each of the individuals. Although they were able to subjectively evaluate what was said, they could not evaluate responses left unspoken by reticent or introverted subjects.

Dweck (2008) asserted that student mindset impacted how much and what students learned. Further, she articulated how educators can promote a “growth mindset” and how to avoid a “fixed mindset.” Primarily, learners and the people that support them should focus on the process of learning to encourage a growth mindset. Learners and supporters focused on outcomes are more likely to develop fixed mindsets (pp. 197-219). Her conclusions permeated educational thinking and changed how educators think about student motivation. The effects are still apparent today. “Mindset appears to be far reaching in education. Growth mindset interventions are in hundreds of schools across the United States, and the impact in the U. K. was described as the ‘mindset revolution that is reshaping education’” (B. Macnamara, personal communication, July 27, 2018).

Sisk, Burgoyne, Sun, Butler, and Macnamara (2018) performed two meta-analyses to determine to what extent and under what circumstances mindset is important to academic achievement. “Overall effects were weak for both meta-analyses. However, some results supported specific tenets of the theory, namely, that students with low
socioeconomic status or who are academically at risk might benefit from mind-set interventions” (p. 1).

Ultimately, the work of researchers who were authors of popular books generated significant conversation and influence among educators as the foundations of SEL came to be recognized by the educational mainstream. Educators gravitated toward the narrative writings of Gardner (1983), Dweck (2008), and others. The collective effect of these frameworks was the realization that educators needed to attend to intelligences of students far beyond IQ (Elias et al., 1997, pp. 2-5). However, Reeves (2011) asserted that most teachers have neither the time nor desire to vet empirical research studies in their field. Instead, they rely on their own opinions, experiences, and experiences of colleagues. Only more recently, within the last 10-15 years, has public education in America sought to formalize SEL into a systemic, enduring influence (Mart et al., 2015).

**Conflict Management**

With the promises of SEL, there is hope of fulfilling the unmet needs of students that often manifest as negative behaviors. Student behavior that disrupts the learning environment typically also results in conflict--conflict between students, teacher and student, teacher and parent, or student and parent. Remedies for conflict in schools called for improvements in student disciplinary procedures, classroom management, and student and parent accountability. These remedies can be categorized together as approaches intended for managing conflict.

Canter (1989) argued that assertive discipline is *applied*. Classroom teachers, he asserted, should have a systematic plan for addressing student misbehavior. This plan focused on bringing awareness to the student that certain consequences would be waiting
for them if they chose disallowed behaviors. The approach required that consequences got progressively more painful to the student as infractions were repeated. Canter believed he was making a marked improvement over the previous classroom management paradigm, which he characterizes as the “Don’t smile until Christmas” approach (p. 58), getting compliance through the perceived threat of an angry teacher. Canter’s work did spark early conversations about the use of positive reinforcement and teaching of specific behaviors that educators want to see from students. Today, teaching specific competencies to students is an essential aspect of SEL.

Following on the heels of Canter’s work, Fay and Funk (1995) introduced the approach known as “teaching with love and logic.” The love-and-logic approach originally was presented as solutions for parents and was meant to teach children character. A child makes a mistake, an adult shows empathy and compassion for the child, and the child learns the consequences, preferably natural ones, of his or her actions. Unlike Canter’s model, which relied on the threat of consequence, Fay and Funk focused on empathy as a means to reduce the number of unnatural consequences given. Three questions that replaced threats redirected students. They were: (a) “What are you doing?” (b) “What are you supposed to be doing?” and (c) “When will you start?” If the student resisted or the conversation made the student sad or uncomfortable, the teacher might say, “I can see you feel sad about that. Maybe take some time to think about what would happen next. I’ll go think about what I might want to do about it.” Again, unlike Canter’s model, immediate compliance was not required, and student thinking happened more often and more quickly.
The demonstration of empathy on the part of the teacher improves teacher/student relationships, while the older model of threat-of-consequences does not (Okonofua et al., 2016). Using an empathic mindset in administering classroom discipline is known to cut school suspension rates in half (Okonofua et al., 2016) and is considered a key aspect of SEL development for both educators and students (Brackett et al., 2015; Elliott, Frey, & Davies, 2015; Fagan et al., 2015; Jagers et al., 2015; McKown, 2015; Patti, Senge, Madrazo, & Stern, 2015; Schonert-Reichl, Hanson-Peterson, & Hymel, 2015; Tolan et al., 2015).

**Behavioral Interventions and Supports**

Positive Behavioral Interventions and Supports (PBIS) continues to be a presence in American education. The PBIS framework is for enhancing the adoption and implementation of a continuum of evidence-based interventions to achieve academically and behaviorally important outcomes for all students (Sugai et al., 2000). In the 1980s, a need was identified for effective behavioral interventions which initiated a series of studies. When the reauthorization of the Individuals with Disabilities Act in 1997 occurred, a grant funded a center. The center was to provide various means of assistance to schools, including several that focused on PBIS (Sugai & Simonsen, 2012). A number of studies have documented the effectiveness of PBIS (Bradshaw, Mitchell, O’Brennan, & Leaf, 2010).

An important aspect of PBIS is that it opened educators to the idea that Canter’s approach and Fay and Funk’s approach were limited somewhat to response and primarily intended for classroom teachers, whereas PBIS utilizes every staff member, and its continuum of supports and interventions are for all students (Sugai et al., 2000). The
PBIS overlaps with SEL in that they both are intended for school-wide application, both in non-classroom and classroom settings, and require explicit social skills instruction (Sugai & Simonsen, 2012).

**Restorative Justice**

The restorative justice movement of the 1970s brought to us the notion that, instead of punishing criminals, providing a chance for offenders to repair harm done to victims is more constructive when harm is done to people and relationship. Many SEL opportunities come with the use of restorative practices in schools. SEL competencies are self-management, self-awareness- social awareness, relationship skills, and responsible decision making. In a restorative justice meeting, when victim and offender meet, voluntarily, there is a need for emotional control, a focus on connectivity and relationships, an awareness of one’s impact on others, taking responsibility, and in the future commitment to repairing harm (Kidde & Alfred, 2011). Restorative justice replaced punishment with reparation, just as school disciplinarians are moving from the carrots-and-sticks philosophy to restoration of relationships and reparation of harm (Amstutz, 2015).

Ultimately, the progression of how educators manage student behavior evolved to a place where the focus changed. The early focus was that of the teacher’s needs and his or her role and capabilities in “managing” students. The more recent thinking is about the students’ needs, as the negative behavior often is a sign of an unmet need. The approaches described in this section are not mutually exclusive. They have much in common but can exist together effectively. Teacher response to negative student
behavior, along with school-wide culture building, and direct instruction of social skills all contribute to empowering student in positive ways.

**Brain Basis for Learning**

Cozolino (2014) noted the paradox of human existence when he pointed out that, “We conceive of ourselves as individuals yet spend our lives embedded in relationships that build, shape, and influence our brains” (xiii). He also emphasized the importance of viewing the brain as a social organ. Human infants, unlike most new organisms, “survive based on the abilities of their caretakers to detect the needs and intentions of those around them” (p. 7).

A child’s ongoing brain development is possible because of the brain’s plasticity which is the brain’s ability to modify its connections or re-wire itself. Plasticity provides opportunities to respond to the demands of our environments as people engage with situations, problems, ideas, and social relationships. Brain development in individual humans, then, requires social relationships, emotional experiences, and cognitive opportunities (Immordino-Yang et al., 2018; Luby et al., 2013; Schore, 2015). Social and emotional competencies not only are malleable, or changed and promoted through education and experience, they can be taught and assessed (Schonert-Reichl, 2019).

For schools, it means there is a critical opportunity and responsibility to provide instruction in SEL (Durlak, 2015; Goleman, 2015; Immordino-Yang et al., 2018; Weissberg et al., 2015).

Blair and Raver (2015) found that, across correlational as well as experimental designs, the impact of ecological context and high quality care-giving on child neurobiological functioning can be powerful and sustained (p. 77). However, the human
brain develops differently based on a learning environment’s level of safety and how rich and meaningful the engagement. This assertion is important with regard to SES, and the role of parents becomes an important aspect of child brain development (Chan et al., 2018; Farah, 2017; Noble et al., 2015). For schools, SEL programming and planning must be done with the home environment in mind.

The stressful early experiences of children of poverty often are related to SEL deficits (D. E. Jones et al., 2015). Also, poverty and early psychosocial disadvantage are associated with short- and long-term physiological changes that are detrimental to child health and well-being (Blair & Raver, 2015). Stressful early experiences alter neural functions that are important for regulating stress response and emotion (Holmes & Wellman, 2009; Rodrigues, LeDoux, & Sapolsky, 2009). Therefore, important to SEL programming design and rationale is that the intent and ability of programming is to counter the effects of poverty and early psychosocial disadvantage (Bierman & Motamedi, 2015; Comer, 2015; Greenberg, Katz, & Klein, 2015). Also, it is important to address the neuroscientific and theoretical basis of development and the relationship to changes in the developing brain of children (Blair & Raver, 2015).

Blair and Raver (2015) presented a psychobiological model of the development of self-regulation that is useful to the SEL conversation in education. Self-regulation was chosen because self-regulated learning is important to academic achievement. It touches on all five domains of the competencies listed by CASEL—though it is most clearly associated with the domains of self-management, self-awareness, and responsible decision making (p. 65).
The authors presented a theoretical model they refer to as “psychobiological architecture,” or “architectonics of self-regulation” which is comprised of attention and executive function, emotion, temperament, stress physiology, and genetic background. Because self-regulation is characterized by both non-conscious, automatic influences and effortful, conscious influences on behavior, this model is known as a “dual-process model.” These influences work in concert to establish and maintain, but also to alter self-regulation in response to current and expected conditions (p. 67).

The most fundamental level of non-conscious influence in a neurobiological model is genetics (Blair & Raver, 2015). Gene variants that modulate neural activity in the pre-frontal cortex (PFC), which is one of the areas that underlie executive functions, can create a shorter or longer time the brain has the presence of dopamine, cortisol, and serotonin (p. 67). All three of these central neurotransmitters have been correlated to cognitive functions important to the SEL conversation, such as mental flexibility, working memory and learning, and personality traits linked to social functioning (Borg et al., 2016).

Although gene variants are associated with psychological outcomes, the context in which the development is occurring influences the outcomes as well. A neurotransmitter such as dopamine increased from its normal level may have a negative effect in one individual but a positive one in another. An important goal of SEL, then, is that youths, regardless of environment or genetic variants, are enabled “to maintain an optimal level of arousal to support attention and engagement: down-regulating physiology when arousal is too high, and up-regulating physiology in situations in which arousal is too low” (p. 68).
Individuals have varying sensitivity to hormones and therefore varying responses to stimulation. Increases in hormones increase neural activity in the PFC which is associated with effective control of attention and self-regulation, but exceptionally low or exceedingly high levels of hormones have other effects. A high level of hormones can decrease brain activity that regulates attention and emotion, while brain activity increases in areas that relate to reactive emotional, attentional, and motoric responses to stimulation (Blair & Raver, 2015).

A final consideration for brain development in children is the physiological preconditions necessary to take advantage of learning opportunities that provide optimal brain development (Immordino-Yang et al., 2018). The old adage is that we perform our best with proper diet, sleep, and exercise. Recent research extends the definition of each of these. Sleep is not only fundamental for neural plasticity and memory (Rasch & Born, 2013), but it also removes toxins that build up in the brain when a person is awake (Xie et al., 2013). In addition to good nutrition with minimal saturated fats and refined sugars, low exposure to toxins is important. Exposure to toxins in pollution and poor quality water is known to have a negative impact on brain development (Ngure et al., 2014). Although brain development does occur within a sedentary lifestyle, the benefits of physical activity are highly advantageous and strengthened with the availability of green space (Bowler, Buyung-Ali, Knight, & Pullin, 2010). The physiological requirements for brain development will continue to be part of the SEL conversation, given SEL’s potential to compensate for socioeconomic disadvantage (Blair & Raver, 2015) and the call to create full partnerships with parents to promote SEL (Garbacz, Swanger-Gagné, & Sheridan, 2015).
Metacognition

These theories--emotional intelligence, mindset, and multiple intelligences--have played an influential, foundational role to educator understanding and the development of SEL in schools. Common to all these theories is metacognition. Metacognition is associated with “higher order thinking which involves active control over the cognitive processes engaged in learning” and is often referred to as “thinking about thinking” and involves overseeing whether a cognitive goal has been met (Livingston, 2003, p. 2).

According to Flavell (1979), metacognition consists of metacognitive knowledge and metacognitive experiences or regulation (pp. 906-910). Metacognitive experiences involve the use of metacognitive strategies or regulation (A. Brown, 1987). Metacognitive strategies are “the sequential processes that one uses to control cognitive activities, and to ensure that a cognitive goal has been met” (Livingston, 2003, p. 3). These processes help to regulate and oversee learning by planning, monitoring, and checking outcomes of the involved activities (Livingston, 2003, p. 3). This area of study provides insights about cognitive processes that support learning and holds several implications for student learning and the importance of teaching students to be more aware of their learning processes and how to regulate those processes to maximize their learning (Livingston, 2003, p. 5). Purposeful SEL attempts to meet these same objectives (Darling-Hammond, 2015; Durlak, 2015; Weissberg et al., 2015).

According to Flavell (1979), the collective research on metacognition indicated that children had limited understanding of their own cognition. Flavell found that children perceived messages and interpreted and recalled them inaccurately. One study’s participants, for instance, could not correctly recall items they were asked to study, yet
they believed that they had done so correctly (p. 906). They “do relatively little monitoring of their own memory, comprehension, and other cognitive enterprises” (p. 960). This shortfall continues to be a trend today (Shriver & Buffett, 2015).

Further, Flavell asserted that the monitoring is not to determine how well you understand a message but “how much you ought to believe it or do what it says to do” (pp. 960-961). He cited specific at-risk behaviors that apply, including drug use, aggressive or criminal acts, and unprotected sex, similar to concerns for youth today (Darling-Hammond, 2015). He concluded his observations of the body of metacognition research available at the time with a prediction:

> It is at least conceivable that the ideas currently brewing in this area could someday be parlayed into a method of teaching children (and adults) to make wise and thoughtful decisions as well as to comprehend and learn better in formal educational settings. (Flavell, 1979, p. 910)

An important aspect of metacognition is its role in the widespread use of student-centered learning environments (SCLEs). Teachers frequently cite student behavior as an obstacle to utilizing SCLE approaches due to the lack of student ability to self-manage learning when structure is minimized and traded for freedom of choice for students based on their learning needs. This deficit is precisely the unmet need that SEL is intended to address (Azevedo, Behnagh, Duffy, Harley, & Trevors, 2012). Azevedo et al. (2012) studied the processes of metacognition and self-regulation for students in SCLEs where computer software learning programs were central to learning. Current interdisciplinary research indicated that learner-centered environments were particularly difficult for students because it required students to monitor and regulate several aspects of their learning. Students had to set and manage meaningful goals, determine which learning strategies to use and assess whether they were effective, and judge one’s own
understanding of the topic (p. 171). The researchers argued that SCLEs are severely limited because the typical learner does not engage in complex adaptive cognitive and metacognitive processes during their learning.

A limitation of the analysis by Azevedo et al. (2012) was that they failed to consider the impact of person-to-person socialization and collaboration in learner-centered environments. The use of computer technology narrowed the focus to an individual learner and his or her thinking. With the ubiquitous use of performance-based and problem-based learning (Savery, 2015; Sturgis, 2016), both of which utilize face-to-face student collaboration, there is a need to understand the effects of student interactions and how they impact self-regulation.

White and Frederiksen (1998) found that the use of software modeling tools in science increased achievement and interest in physics for middle school students. The project they studied was a constructivist, inquiry-based, physics endeavor. A finding pertinent to the metacognition aspect of SEL was the use of reflection in the learning process. Students used a process of scaffolded inquiry, reflection, and generalization while a matched middle school group (grades 7-9) and a high school group (grades 11-12) did not. The group using metacognitive approaches achieved at a level higher than the high school students learning the same material.

The authors determined that low-achieving students who were paired high-achieving students benefited not only from the collaboration but also from the metacognition strategies used (White & Frederiksen, 1998, pp. 90-91). “These results suggest that, from an equity standpoint, curricular and assessment approaches can be created that are not merely equal in their value for, but actually enhance, the learning of
less advantaged students, without impeding the high-achieving students” (White & Frederiksen, 1998, p. 91). This finding speaks to the need for SEL programming that improves equity in learning.

**Evidence of Effectiveness**

Mental health agencies, communities, and schools have intersected in the endeavor to utilize SEL (Garbacz et al., 2015; Gullotta, 2015; Tolan et al., 2015). A rationale for utilizing SEL is based on the many potentially positive outcomes and preventative characteristics of SEL programming. With increased social and emotional wellness, there is evidence of increased academic performance of students who have experienced SEL in schools which is tied to decreased school drop-out rates and higher productivity and increased economic gain (Belfield et al., 2015). There are additional positive social outcomes such as healthier behaviors and reduced crime (Weissberg et al., 2015). Meta-analyses reveal evidence that supports the importance of SEL in schools and community agencies (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Hattie, 2009; Wang et al., 1993; Weissberg et al., 2015).

**Influences on Learning**

To see how and where the influences of SEL fit in for schools, it is appropriate to briefly review a broader research base of influences on desirable student outcomes. Wang et al. (1993) performed an educational research review to identify and estimate influences of educational, psychological, and social factors on learning. Content analyses, expert ratings, and results from meta-analyses were used to quantify the importance and consistency of variables that influence learning. They found moderate to substantial agreement on the variables’ influences. Proximal variables such as psychological,
instructional, and home environment exerted more influence than distal variables such as policy, demographic, and organizational influences (p. 249). They also found evidence that suggested a knowledge base describing learning influences had been developing for several decades, yet policies studied received the most attention and appeared to be least influential on learning (pp. 293-294).

The authors identified three key proximal variables of student learning--psychological, instructional, and home environment--as having the strongest effects (p. 290). They analyzed content from 200 authoritative reviews and handbook chapters on learning influences. One hundred seventy-nine were chapters and review articles. Of the 200, 179 were coded on a three-point scale to code the strength of each of the variables of learning with the weakest receiving a one. About 3,700 summary ratings were statistically analyzed. They reported t-test averages for content analyses, expert ratings, and meta-analyses. They found that the people most integrally involved with learning--teacher, parents, and students--mattered most. Policies at all levels had the least effect (pp. 293-294). “Knowing that proximal variables have a greater impact on school learning than distal ones, educators, when formulating policies, should be mindful of where they can make the biggest difference in terms of the student, the classroom, and the home” (Wang, et al., 1993, p. 293).

Of the psychological influences, metacognitive, cognitive, motivational, and affective variables played the most significant role. These included the applications of self-regulatory and self-control strategies. Further, the authors supported assertions already made by other researchers (Gardner, 1983; Goleman, 1995) that “Motivational and affective attributes are now considered cognitive constructs and play a key role in
students’ perseverance and enthusiasm for learning. All these psychological attributes are essential to the development of independent, self-regulated learners” (pp. 280-281). A potential weakness of the analysis was that the researchers’ selection of categories that did not disaggregate for student sub-populations. In final rankings of influences, student sub-populations were included in an average that included school culture and climate, policies, and practices. More detail about the influence of student background is needed if SEL is to be used to address learning gaps between sub-groups.

In a landmark work synthesizing over 800 meta-analyses relating to achievement, Hattie (2009) further delineated influences on learning. The study synthesized more than 800 meta-analyses of quantitative studies that related to student achievement in K-12 settings. It was based on more than 50,000 studies and many millions of students (p. ix). Hattie noted several limitations of the study including that it is limited to student achievement outcomes. Therefore, non-academic outcomes such as SEL competencies were not included. Another limitation Hattie (2009) acknowledged was that the achievement outcomes do not differentiate between regular classrooms and innovative settings. His assumption was that innovation may be likely to create improved achievement (p. 6). Six factors were identified that contributed to achievement—the child, home, school, curricula, teacher, and instructional approaches (p. 31). Using the six sources of contributions as categories, he identified 138 separate influences on learning and generated an effect size for each. Hattie insisted the 138 influences are not a “what works” list but a model of teaching and learning, a barometer of what works best (p. ix). The data presented were based on correlations, not causation. The data, he warned,
proved nothing “beyond a reasonable doubt,” but the intention was to weave a story “that has some convincing and some coherence” points (pp. 3-4).

Indeed, 90% of the contributions related to achievement that were studied had a positive influence on learning, but Hattie (2009) warned about teacher claims that they are having a positive effect on achievement. “Virtually everything works. One only needs a pulse, and we can improve achievement” (p. 16). He therefore set the bar for effect size at $d = 0.40$, the mean of all the effects that were measured and was considered the “hinge point,” or perhaps tipping point, throughout the descriptions of the study. He argued that influences less than that should be given more consideration, while the influences above $d = 0.40$ “are worth having as a major focus . . . in trying to understand the common denominators of what makes a difference” (p. 16).

Of the 138 contributions to learning, 66 scored a 0.40 or higher. Many are pertinent to the SEL conversation. The task of self-reporting grades, which is the students’ estimates of their own performance, had an effect size of $d = 1.44$. This contribution is the students’ estimates of their own performances (Hattie, 2009). To benefit from this influence, students needed to demonstrate self-awareness and self-manage at a level where they can accurately assess their performance. Assessing current performance accurately leads to achievement of personal and academic goals (Weissberg et al., 2015, p. 6). Several classroom influences were noted. The classroom climate, decreasing disruptive behavior, and teacher-student relationships all had effect sizes above the mean. All these influences are known to be enhanced by SEL (CASEL, 2012; Hulvershorn & Mulholland, 2018; D. E. Jones et al., 2015).
Social-Emotional Learning Outcomes

The influence of SEL can be measured in terms of short- and long-term outcomes that can result from SEL for individuals. With universal and targeted interventions, the potential for desirable outcomes exists in many contexts for youth, from early childhood to juvenile justice settings to higher education (Elias et al., 2015). A substantial research base shows that SEL interventions are effective in encouraging social and emotional competencies which results in improved social and academic adjustment, reduced levels of conduct problems, and reduced emotional distress (Durlak et al., 2011; Sklad, Diekstra, Ritter, Ben, & Gravesteijn, 2012; Weissberg et al., 2015). Weissberg et al. (2015) described SEL learning products as young people who become “knowledgeable, responsible, caring and socially competent--on their way to becoming positive family members and neighbors, contributing citizens, and productive workers. In addition to academic competencies, students should become “culturally literate, intellectually reflective, lifelong learners” (p. 4).

Also, longitudinal analyses have shown links between social and emotional competencies and better health and wellness later in life (D. E. Jones et al., 2015). Hawkins, Kosterman, Catalano, Hill, and Abbott (2008) found that social development interventions, including social competence, when used in elementary schools, positively affected participants 15 years later. The study relied heavily on self-reported data and was geographically limited to high-crime schools in Seattle, Washington. Theory-based interventions influenced some but not all indices of adult functions in individuals in their mid- to late 20s. The authors concluded that the interventions can positively affect attainment, functioning, and mental health in young adulthood.
**Academic Benefits**

The broad strokes that characterize SEL outcomes are that young people will develop skills needed for academic success in school and social success in their communities and families (Durlak, 2015; Elias et al., 2015; Weissberg et al., 2015). Short term benefits exist for students in schools that struggle with self-regulation. Even a single technique such as controlled breathing can provide immediate improvement in cognitive control (Goleman, 2015).

In a meta-analysis of 213 studies involving 270,000 students cited in scholarly papers over 4,000 times, Durlak et al. (2011) found that students showed an 11 percentile-point gain in academic achievement compared to students who did not participate in SEL programs. Students participating in the SEL programs also showed other improvements. Their behavior, their attitudes toward school, themselves, and others improved, and they managed stress and emotions better.

Building on the 2011 study by Durlak et al. (2011), Taylor, Oberle, Durlak, and Weissberg (2017) performed a meta-analysis of 82 school-based, universal SEL interventions involving 97,406 students in the K-12 grade range. Follow-up outcomes (6 months to 18 years after students participated in SEL programs) demonstrate SEL’s enhancement of positive youth development, including positive increases in SEL skills, attitudes, positive social behavior, and academic performance while finding decreases in conduct problems, emotional distress, and drug use.

**Counteracting Disadvantage**

Considerable research confirms that SEL counters the effects of early disadvantage (Blair & Raver, 2015). “The potential benefits of improved behavior and
well-being of school-age children are both direct and long term. Improved behavior leads to a healthier classroom atmosphere and reduced interruptions and supports effective instruction that influences academic achievement” (p. 73). D. E. Jones et al. (2015) stated that in the long run, there are “reductions in delinquency, antisocial behavior, school dropout rates, academic failure, and mental health problems” (p. 97).

Universal SEL interventions can help students resist engagement in deviant or dangerous behavior (D. E. Jones et al., 2015, p. 98). Also, universal SEL interventions help youth with coping strategies across an array of experiences and settings and are positive, proactive, and limit potential for stigmatization (p. 98). In a review of programs that targeted juvenile justice settings and populations, Tolan et al. (2015) found consistencies in the programs studied that related positive outcomes. The programs appeared to teach students to handle emotions, be conscientious, delay gratification, and persevere in the event of obstacles or frustration (p. 268).

A selected finding that appears in the 2015-16 NCES findings but does not appear in the 2009-10 report related to SEL. Higher percentages of schools located in suburbs (74%) and cities (73%) reported they had a formal program intended to prevent or reduce violence that included social-emotional learning training for students than did schools located in towns (62%) and rural areas (51%). Higher percentages of suburban schools had formal programming that included social-emotional training meant to reduce violence than did rural areas in 2017 (Diliberti et al., 2017, p. 3). Three factors were reported that limit schools’ efforts to reduce crime in “a major way” (p. 3). There was a lack of alternative placements for disruptive students (30%), inadequate funds (28%), and policies on disciplining special education students (17%; Diliberti et al., 2017, p. 4).
The benefits of SEL have application in considering adolescent use of social media. Adolescent interactions on social media is known to impact youths negatively (Ahn, 2011; J. D. Brown & Bobkowski, 2011; Nathanson et al., 2013; Spada & Marino, 2017; Strasburger et al., 2010; Valkenburg et al., 2006). Often, adolescents who use social media do not have the benefit or advantage of adult monitoring (Romo et al., 2017), yet social and emotional skills are necessary for connecting character and healthy online decisions. SEL instruction provides opportunities for students to apply empathy, compassion, respect, and intelligent behavior while making decisions online (“Online Safety & Social,” n.d.).

One of the powers of SEL is that it enables students to communicate on a respectful level. People can understand each other rather than viewing conflicting cultures in negative ways. “Blurting out,” for instance, is frowned upon in formal classroom settings. Yet each culture has rules to guide behavior regarding emotions that should be expressed in a situation. On one hand, the ability to follow rules maximizes interpersonal effectiveness. People who conform to the rules will be judged appropriate (Hecht & Shin, 2015). However, Muhammad (2017) warned that the individual’s culture may not fit in with the majority of people in a particular setting but insisting on conformity can be damaging. Educators should note that non-conforming behavior often is normal behavior for the individual’s culture. An African-American who attends a church where the leader utilizes “call and response,” is perfectly within his or her culture’s norm to respond out loud when a teacher’s words speak to the student positively. This is often viewed as a lack of self-control, whereas the student’s culture should be considered as the teacher addresses the student. Failing to recognize this
concept puts educators at risk of misidentifying students needing targeted behavioral instruction and can deny a student an aspect of their culture.

**Economic benefits.** Implementing a school program costs money. Before making the commitment to implementing SEL in a school, the budget gatekeepers are likely to request a benefit-cost analysis which compares the monetary cost of an investment with the monetary value of its outcomes. D. E. Jones et al. (2015) noted that the value of prevention is usually unquestioned, therefore when an SEL implementation is proposed, it should be done so in the name of prevention. The funds necessary to address such issues as crime, mental and physical health, and substance abuse, once entrenched, greatly exceed the resources that would be directed to an intervention such as SEL (p. 111).

Belfield et al. (2015) measured six SEL interventions and found that they “easily passed a benefit-cost test. In fact, the weighted average benefit-cost ratio across all six interventions with prior evidence of effectiveness indicates that identified benefits outweigh the costs by a factor of 11:1” (p. 46). However, the authors described several issues with placing value on specific interventions. There was concern about how social-emotional skills are defined and measured, in what contexts they are measured, and what instruments are used. Also, there were methodological challenges. If the construct chosen to measure the skill was the one representing a person’s traits, it still may be that other traits or situations, such as education itself, were driving the association (pp. 11-12).

Belfield et al. (2015) also found that precise associations between social-emotional skills and earnings remain to be determined. The researchers predicted that many interventions could pass the benefit-cost test, but many changes in SEL evaluation
research would be needed. In the cost analysis, an intervention’s inputs should be reported, and there should be specification that the intervention is actually different than a standard intervention. In the analysis of benefits, a benefits map should be drawn and used commonly in research. Which impacts can and cannot be monetized should be identified, as should how the impacts might overlap. Also, there need to be calculations for shadow prices for student behaviors. Shadow pricing refers to monetary values assigned to costs that are either currently unknowable or difficulty to calculate (Kelly, Maulloo, & Tan, 1998). Finally, there should be examinations of resource consequences for schools with students that have low social-emotional skills. For instance, the Behavioral Assessment System for Children-Teacher Rating Scale (BASC-TRS), which is widely used to measure student behavior, has not been a subject of research that would discover its economic implications (Belfield et al., 2015).

**Emergence of Social-Emotional Frameworks**

Researchers continue to define and redefine SEL skills or competencies necessary to the development of young people. Elliott et al. (2015) defined social skills as “socially acceptable, learned behaviors that enable an individual to interact effectively with others and to avoid or escape unacceptable behaviors that result in negative social interactions with others” (p. 302). They identified seven outcomes --communication, cooperation, assertion, responsibility, engagement, empathy, and self-control (p. 302). Other researchers simplified the skill need. Goleman (1995) described skills necessary for adulthood as interpersonal, intrapersonal, and practical. D. E. Jones et al. (2017) placed social and emotional skills under the broad categories of interpersonal and intrapersonal skills.
The progress in research of social theories, intelligence theories, and brain research combined with the increased momentum for closing achievement gaps has provided urgency and contexts for the emergence of SEL as a framework to be utilized in schools. Structured SEL programming has been reviewed widely. More than 500 evaluations of SEL programs have been conducted, mostly in school-based settings, and mostly of programs intended for all youth, though some evaluations targeted specific student adjustment problems. The 500 evaluations mostly focus on school-based efforts, although many programs incorporated community involvement and intervention efforts outside of the school day (Weissberg et al., 2015).

In 1994, attendees of the Fetzer Institute formed the Collaborative for Academic, Social, and Emotional Learning (CASEL) as an organization with the mission to help establish evidence-based SEL in PreK-12 education. The Fetzer Group introduced the term “social and emotional learning” (SEL) as a conceptual framework to promote competency in these areas in young people (Weissberg et al., 2015).

SEL programming involves implementing practices and policies that help children and adults acquire and apply the knowledge skills, and attitudes that can enhance personal development, establish satisfying interpersonal relationships, and lead to effective and ethical work and productivity. These include the competencies required to understand and manage emotions, set and achieve positive goals, feel and show caring and concern for others, establish and maintain positive relationships, and make responsible decisions. (CASEL, 2012. p. 6)

**Competency Domains**

Weissberg et al. (2015) presented an updated CASEL framework for SEL that identified competency domains and learner outcomes, defined the role of the support system from adults, and identified the role of policy at the district, state, and federal levels (pp. 6-11). The five competency domains were self-awareness, self-management,
social awareness, relationship skills, and responsible decision making. Each of these competencies are defined as follows:

Self-awareness- Self-awareness involves understanding and recognizing one’s emotions, personal goals, and values. High levels of self-awareness require the ability to accurately assess oneself as well as the ability to see how thoughts, feelings, and actions are interconnected (p. 6).

Self-management- Self-management is the ability to regulate emotions and behaviors. This includes the ability to control impulses, manage stress, delay gratification, and persevere through challenges to meet goals. The ability to meet this competency requires certain attitudes in addition to the required skills (pp. 6-7).

Social awareness- Social awareness competence requires empathy and compassion with diverse others. It also requires an understanding of societal, school, and community norms for behavior (p. 7).

Relationship skills- Relationship skills are the skills needed to maintain and establish healthy and rewarding relationships and to act in accordance with social norms. Competence in this domain involves communicating clearly, listening actively, cooperating, resisting inappropriate social pressure, negotiating conflict constructively, and seeking help when it is needed (p. 7).

Responsible decision making- For the development of young people, learning and teaching about responsible decision making often centers around risky behavior. This domain “requires the knowledge skills and attitudes needed to make constructive choices about personal behavior and social interactions across diverse settings. Competence in this domain requires the ability to consider ethical standards, safety concerns, accurate
behavioral norms for risky behaviors, to make realistic evaluation of consequences of various actions, and you take the health and well-being of self and others into consideration” (p. 7).

**School social-emotional components.** Learning opportunities in schools should entail explicit instruction and student-centered learning approaches (Weissberg et al., 2015). The approaches should help students engage in the learning process and develop analytical, communication, and collaborative skills. These skills need to be taught, modeled, practiced, and applied in diverse situations so that young people and adults use them as part of their daily repertoires of behaviors.

Effective SEL approaches often are represented by the acronym SAFE (Durlak et al., 2011; Durlak, Weissberg, & Pachan, 2010). The approaches are *Sequenced*: connected and coordinated activities to foster skills development; *Active*: Active forms of learning to help students master personal and social skills; *Focused*: a component that emphasizes developing personal and social skills; and *Explicit*: Targeting specific social and emotional skills.

More recently, a framework of four school-and-teaching components emerged that provided a model for schools to match (CASEL, 2017). Two of the components require a classroom teacher’s individual efforts. The first requirement is that free standing lessons should enhance students’ social and emotional competence explicitly. Before the emergence of SEL in schools, a typical classroom approach to promoting student self-control may have been to provide disincentives for a behavior by providing a negative reinforcement to condition the student to choose a different response. Using a lesson that reflects an SEL approach, a teacher would teach an explicit lesson about the prefrontal
cortex part of the brain and how it coordinates higher-order cognitive processes and executive functioning. These skills, students learn, allow an individual to pause long enough to assess a situation, consider options, and execute a response (S. B. Johnson, Blum, & Giedd, 2009, pp. 216-221). With better understanding of their own brains, students are able to identify their area of improvement and begin to improve their responses (Immordino-Yang et al., 2018).

A second requirement of the classroom teacher is to engage students in activities that directly promote SEL (CASEL, 2017). Cooperative learning and project-based learning require a great deal of student interaction, which provides many opportunities for students to practice new skills learned from explicit SEL instruction. The classroom teacher should revisit positive student interaction prior to these group activities and reinforces correct social-emotional behaviors throughout the learning cycle (Weissberg et al., 2015).

A third component of SEL instruction requires integration of academics. Hypothetically, secondary school science teacher, for instance, could integrate SEL, math, science, economics, and language in a National Aeronautics and Space Administration (NASA) unit. The students learn the science and costs of landing on Mars. They find that a project can cost billions, which can lead to empathetic discussions about the lack of equity of technology around the world. Showing self-control as they tolerate other opinions may be required as well (CASEL, 2017).

A fourth component of SEL instruction is the building-wide endeavors involved in a school (CASEL, 2017). School-wide programs utilize universal school messages and events to promote positive behavior and provide support and interventions. They seek
outcomes focused on system change with the goal of improving student behavior and social culture and the teaching and learning environment (Bear, et al., 2015).

A school should use organizational strategies that promote SEL as a school-wide topic of importance, as the culture and climate must be conducive to learning to maximize the school’s potential for delivering quality academic and SEL instruction (Horner & Sugai, 2015). Reinforcing positive and pro-social behavior is widely used in the United States today (Colvin & Sugai, 2017; Horner & Sugai, 2015). Schools utilize student recognition events and promotions, such as anti-vaping educational assemblies and anti-bullying rallies to encourage students to choose positive behaviors (Peterson & Skiba, 2000; Whitaker, 2013).

In schools, SEL programming helps establish positive school and classroom cultures and climates (Hulvershorn & Mulholland, 2018). These approaches create conditions that indicate to students that their school is safe, caring, cooperative, well managed, and participatory (Zins, Walberg, & Weissberg, 2004). All four school SEL components work in concert for students, but Durlak (2015) warned that school personnel should not conduct an SEL program unless they are committed to achieving high quality implementation.

**Implementation**

One area of focus of the proposed study is SEL implementation including what interferes with effective implementation and what levels of implementation are in place in rural Colorado schools. Because of the large amount of literature on the broad topic of implementation, this section will be limited somewhat by reviewing school implementation research literature that uses the SEL lens.
Implementation generally refers to what a program consists of when it is delivered in a particular setting. Durlak and DuPre (2008) reviewed 500 quantitative studies to assess the impact of implementation on program outcomes. The second purpose was to identify factors that influence the implementation process. Results offered strong empirical support to the conclusion that levels of implementation affect the outcomes of programs for prevention or promotion.

Durlak (2015) argued that there are eight aspects of implementation, 23 ecological factors that can affect implementation, and 14 steps involved in achieving quality implementation. The eight aspects of concern for implementation are fidelity, dosage, quality of delivery, participant responsiveness, program differentiation, monitoring of control/comparison conditions, program reach, and adaptation. Durlak and DuPre (2008) defined each of these. Fidelity is the successful and intentional delivery of the parts that comprise the intervention, also known as integrity, adherence, or faithful compliance. Dosage is the amount of the original program that has been delivered. Quality is how well the program elements were delivered clearly and correctly. Participant responsiveness is engagement on the part of the participants, how well it holds their attention and stimulates their interest. Program differentiation involves the extent the program’s theories or practices can be identified differently from a similar program.

The 23 ecological factors can be grouped by the origins of the influence that impact implementation. Durlak (2015) identified five categories: community-level factors, characteristics of school staff, the compatibility of the program for the site, features of the host school, and the quality of the professional development provided. Community level factors could include funding issues or educational policy or mandates.
For staff, their level of efficacy or perceived need of the program might impact implementation. The professional development should be provided both pre-service and ongoing during later implementation phases.

D. C. Meyers, Durlak, and Wandersman (2012) reviewed research on implementation and found agreement that there were at least 14 steps in implementation. They found that 10 of the 14 steps should be completed before implementation begins. The steps completed prior to implementation attempt to address the ecological factors involved with the program site. In short, the authors asserted that a quality implementation framework should assess all aspects of the site’s readiness and the readiness of the people involved or impacted. After these issues have been addressed, there are two final steps that should take place. There should be provisions for ongoing technical assistance to providers and mechanisms to collect implementation progress data for the purpose of providing supportive feedback.

Durlak (2015) suggested that it is important to plan for potential problems and plan for sustainability at the outset of SEL implementing. Staff turnover could impact the initiative, or other mandates possibly could occur in the middle of implementation that might push the existing implementation to a lower priority. Budgeting plans should seek local funding rather than from outside sources that are beyond a school’s control or influence. Elias and Weissberg (2000) noted two important aspects of sustainability. One is that teachers championing the initiative serve as positive role models that can sustain a program. Second, programs that are integrated in the entire school’s culture and every classroom are more likely to continue.
Important to the topic of the proposed study, SEL implementation, are the conclusions by Durlak (2015) that ecological factors have influence before and during implementation. Second, levels of implementation do affect the outcomes of programs. “Program outcomes cannot be interpreted appropriately without information regarding the level of implementation that was achieved” (Durlak, 2015, p. 396).

**Rural School Challenges**

Given the findings discussed in the previous section, rural districts, like urban and suburban districts, experience challenges and inhibitors when implementing SEL. Rural school ecological factors require additional consideration, since some influences pertain specifically to rural settings and not others, and the intensity of the factors can differ for rural settings. In particular, rural culture, geographic isolation, and funding influence differently than in other settings (Best & Cohen, 2014; Brenner, 2016; Bryant, 2007; Culbertson & Billig, 2016; A. B. Meyers et al., 2015).

Rural districts struggle to recruit and retain high quality teachers as well as counselors and health care providers (Best & Cohen, 2014; Brenner, 2016; Bryant, 2007; Culbertson & Billig, 2016; A. B. Meyers et al., 2015). Rural schools combat stereotypes of rural living as they recruit (Bryant, 2007). Then teachers who actually do choose a rural setting often are required to teach multiple subjects which is less desirable than teaching a single subject where less expertise and preparation time are required. Mandates for highly qualified status requires teachers to seek licensure in areas outside their specialty and undergraduate preparation (Brenner, 2016; Culbertson & Billig, 2016). Maintaining adequate staff in general is difficult for rural administrators, since meeting federal and states mandates often requires many people wear many hats who then are
unable to specialize in a single area (Ashton & Duncan, 2012). In addition, they often perform these duties for salaries lower than jobs in non-rural settings (Bryant, 2007; Culbertson & Billig, 2016). Also, cultural isolation contributes to the staff retention problem (Ashton & Duncan, 2012; Best & Cohen, 2014; A. B. Meyers et al., 2015; San Antonio, 2018), and administrators, often working solo, feel isolated and experience low morale (Ashton & Duncan, 2012).

Mandates, more often than not, plague rural schools (Bryant, 2007). NCLB is an example of legislation that failed to recognize the unique needs of rural schools (Brenner, 2016). Mandates often are designed with larger schools and staffs in mind, yet smaller districts are required to meet the same level of accountability standards as larger districts (Ashton & Duncan, 2012). L. D. Johnson, Mitchel, and Rotherham (2014) attributed this problem to the idea that the people making decisions for rural America do not spend time in rural America to understand rural problems (p. 16).

In Colorado, the rural educator voice is a minority even when asked for input. The statewide survey of educators known as Teaching and Learning Conditions Colorado (TLCC) asks Colorado educators to weigh in on working conditions, resource availability, community involvement, and student conduct. Of the 35,475 respondents, only 4.6% worked in small rural schools. Another 16% of respondents represented rural schools, and 79.4% were from non-rural schools (CDE, 2018c). Each respondent’s survey was counted in the survey, but schools with at least 50% participation, with a minimum of five teachers, can access their own data. This is another example of a rural school challenge. Confidential surveys with useful data often are not available due to low response totals.
Mandates like NCLB often require extra funding. Yet government attempts to provide extra money in the form of grants tend to increase financial inequities, with rural schools impacted negatively in communities where economies are already weak (Bryant, 2007). Rural school districts often cannot compete with larger districts in competitive grant-seeking efforts. Resources for grant writing are scarce in rural districts, and larger districts submit proposals with promises of impacting a much greater number of students than rural districts could achieve. Larger districts therefore tend to receive more grant awards (Brenner, 2016).

Many rural communities have existing economic difficulties aside from school needs that ultimately impact the ability to fund schools. Compared to larger school districts, community members’ income, community tax base, and per pupil funding is often lower, while poverty, family transience, homelessness, per pupil costs, and unemployment are higher, (Bryant, 2007; Culbertson & Billig, 2016; Mueller, 2008; San Antonio, 2018; Wimberly & Brickman, 2014).

Internet connectivity continues to be an additional issue for rural areas (Best & Cohen, 2014). They often lack the telecommunications infrastructure or the ability to keep up with computer technology upgrades. This not only impedes student learning, but it also interferes with staff professional development and slows the teacher evaluation process (Best & Cohen, 2014). The use of long-distant Professional Learning Communities (PLCs) for single-subject teachers like band or art is highly recommended for professional development in rural areas (DuFour, DuFour, Eaker, Many, & Mattos, 2016). However, this option is complicated by unreliable internet availability.
The cultures of small towns also play a role in challenging rural school districts. A community’s identity is important for its inhabitants (San Antonio, 2018). For many small communities, financial stability and social status are gained through ranching and farming endeavors (Wimberly & Brickman, 2014). Often there are conflicting values related to post-secondary educational and vocational attainment. Young people are mentored throughout their school years by adults who encourage them stay in the community to carry on the industry while educators encourage them to leave to attend post-secondary schools (Wimberly & Brickman, 2014). A well-known parallel from urban settings is that young adult males are discouraged from attending college, finishing high school, or even become literate citizens due to family and cultural influences. Both rural farmers and urban mechanics prefer their sons to maintain the family business rather than excel at school (Wilhelm & Smith, 2014; Wimberly & Brickman, 2014).

The relationship between community and the schools can create tension that leads to obstacles, so when people from outside the rural setting bring outside influences related to school programming, tension can result that interferes with the success of the initiative (Arnold et al., 2005). This applies to services related to SEL. Youths growing up in impoverished rural communities face numerous developmental challenges that can adversely impact their development and adaptation to early adulthood. These developmental challenges may be addressed in the classroom or with mental health services. Often there is stigma attached to receiving mental health services (A. B. Meyers et al., 2015). When educators see a need for mental health services for a student, there are several impediments in addition to the stigma. Public transportation typically does not exist nor does an abundance of childcare. If the distance to services is great, there is a
smaller likelihood that impoverished parents will provide money for the transportation and perhaps childcare for siblings. They would also need to overcome any beliefs that seeking health care may be a failure on their part (A. B. Meyers et al., 2015).

A town’s identity is very much tied to the school as its core. Declining school enrollments and exodus to urban areas for job seeking threaten to close schools (Bryant, 2007). As a result, there are more rural schools sharing resources, from consolidation of sports teams to shared mental health resources (Culbertson & Billig, 2016). With declining enrollment comes cuts in teacher positions, leaving someone among the remaining teachers to pick up an additional subject, which is more work, again contributing to the inability of rural schools to retain teachers.

To summarize, there are many challenges for rural school districts. Many of the obstacles relate to resources--for both schools and community members. Solutions to these problems largely are out of the school districts’ scope since money woes often are subject to the economy or school funding formulas or tax base. Other challenges for rural schools have to do with how the community thinks and feels about its school system or how it perceives education. These obstacles, if not addressed, have potential to prevent successful implementation of SEL programming (Durlak, 2015; S. M. Jones & Bouffard, 2012).

**High-Achieving Rural Schools**

Barley and Beesley (2007) found that school leaders in high-performing, high-needs rural schools reported many barriers that had to be overcome to experience success. Economic barriers were many, including a small tax base, declining enrollment, and high
poverty with limited employment opportunities and low adult education levels of the communities served (Arnold et al., 2005; Bryant, 2007; A. B. Meyers et al., 2015).

Leaders of these successful high-needs rural schools also cited the difficulty of serving a high number of special needs students. Also, they had difficulty creating space for teacher collaboration due to scheduling in rural districts, which tend to limit the ability of educators to meet the needs of all students (Barley & Beesley, 2007). Mueller (2008) reported that “Although correlations between District Ratings [for student achievement] and socioeconomic factors seem to support the idea that demographic challenges exist and can be formidable, those challenges are not surmountable” (p. 10). Much could be learned from case study research with these school leaders and is an area of research to add to the rural school knowledge base.

State-Specific Research in Rural Settings

A. B. Meyers et al. (2015) studied the application of an ecological model of organizational consultation in a large rural county in Illinois. The rural communities studied were adopting SEL as a part of a county-wide initiative to improve mental health services for children. The focus of their study was to understand the collaboration between school-based consultants and consultees as they chose a universal school-based curriculum addressing SEL objectives (pp. 109-110). They adopted an ecological model of consultation that emphasized active engagement of consultation participants. It highlighted the role of organizational consultants as they supported primary prevention and universal service delivery (p. 112).

The researchers noted the existing evidence about rural school challenges. The county’s rates of pregnancy, domestic violence, alcohol-related hospitalizations, and
fatalities were above state averages. The organizational consultants identified key problems for the participating schools. Youths engaged in at-risk behaviors such as drug and alcohol use and sexual behaviors. Children lacked the benefit of protective factors that could outweigh other influences. Districts experienced shrinking enrollments, funding cuts, and unfunded mandates such as a new state requirement that schools address SEL learning standards. Their findings support the proposed study’s selection of implementation challenges as a predictor variable.

With increased interest in SEL, rural schools have many challenges ahead to meet the requirements of known best practice in SEL and its implementation. There are no known measures of levels of implementation of SEL in rural Colorado. Although literature indicates that leaders perceive their schools are impacted by social, geographical, and economic issues unique to their situation, there are no empirical data that have recorded the beliefs about SEL implementation challenges in rural Colorado districts. More knowledge about best practices in this area can help build a body of knowledge about best practices specific to rural schools during this era of high interest in SEL. This knowledge could encourage more rural Colorado schools, as well as rural schools across the nation, to successfully plan for and implement SEL programs to support increased student achievement and overall well-being.
CHAPTER III

METHODOLOGY

This chapter describes the research design and methodology of the study. It includes descriptions of the population, sampling, data collection, and data analysis. The objective of the chosen methodology as stated in the Institutional Review Board (IRB) was to generate useful information about implementation of SEL in rural Colorado schools (Appendix A). I sought to understand what levels of implementation are in place for Colorado rural schools that use SEL (Appendix B). The quality of implementation is known to be impacted by inhibitors or challenges that rural schools overcome when implementing an initiative. I also sought to understand why rural schools choose to implement SEL. The data generated from the study revealed how the three variables correlate. The researcher’s intent was to see what the data themselves suggest, “akin to a detective following a line of evidence” (Cohen, Manion, & Morrison, 2007, p. 507).

Purpose Statement

The purpose of this the study was to determine correlations between implementation reasons, challenges, and levels of implementation of SEL programming as reported by Colorado rural school administrators or other personnel assigned to monitoring building-wide SEL efforts.

The study focused on four objectives:

1. To identify the circumstances in rural Colorado schools that impact SEL implementation efforts.
2. To identify SEL implementation efforts and challenges as reported by Colorado rural school leaders.

3. To identify the impetuses for implementation of SEL in rural Colorado schools as reported by Colorado rural school leaders.

4. To determine if the identified challenges or impetuses can predict levels of SEL implementation.

**Research Questions**

The purpose of the study was to determine correlations between SEL implementation levels and two other variables--implementation challenges and implementation impetus.

Q1 Do implementation challenges identified by rural Colorado school leaders predict levels of implementation?

Q2 Do the impetuses identified by rural Colorado school leaders for implementing SEL predict levels of implementation?

**Research Design**

The design proposed was the cross-sectional survey design, a single, unrepeated survey (Gray, Williamson, Karp, & Dalphin, 2007). The cross-sectional survey collects data from a representative subset at one point in time and can be done in a short amount of time (J. R. Evans & Mathur, 2005). It is beneficial for researchers attempting to measure current attitudes or practices or assessing program needs (Creswell, 2012; J. R. Evans & Mathur, 2005; Muijs, 2012). In this case, the study measured practices, challenges, and reasons for implementation. Survey responses provided data about school leaders’ identified reasons and challenges in SEL implementation. It also asked leaders to
answer questions about established SEL practices which provided an understanding of their levels of implementation.

A cross-sectional survey design also provides the opportunity to collect data that we can generalize to a population (Muijs, 2012). Findings of the study can be applied to other states’ rural schools with similar implementation challenges. The implementation needs of rural school communities were identified to inform policymaking. The magnitude of the challenges may suggest a greater commitment of funding to rural schools.

Cross-sectional survey research is highly flexible and provides a high level of confidentiality which may lead to more candid answers in the educational research realm (Muijs, 2012). School leaders, especially in the role of principal, bear a high level of scrutiny (Waters, Marzano, & McNulty, 2005; Whitaker, 2003). The confidential nature of the survey approach removes the public scrutiny, allowing higher likelihood for accurate answers (Muijs, 2012). Once the data were collected, identifiable information was removed from responses.

Of the two main lines of inquiry, qualitative and quantitative, the features of quantitative research are better suited to answer the research questions of this study. Given that the respondents were asked to confirm or deny, rather than explain, their use of existing best practices and heavily researched implementation challenges and reasons, a quantitative approach was appropriate (Cohen et al., 2007; Creswell, 2012; Merriam, 2009). Acquiring this data did not require the rich, in-depth explanations of what the respondents perceive, but rather a confirmation or denial of existing, defined components of SEL. Lengthy descriptions of challenges and reasons gathered using a small number of
respondents were not expected to yield data that reflect a wider variety of rural school experiences. Instead, a larger sample was collected using a survey as the data collection instrument.

**Participants**

The study sample requested for collection was taken from SEL implementation leaders of all Colorado schools that were considered to be in a rural district, which resulted in a sample of 113 participants. The primary characteristic required for respondent participation is that to have the role of administrator of school SEL programming. Although school leaders typically are called principals, often the duties have been delegated to another capable educator in the district. Broadening the definition from “principal” to “school leader” in charge of administering and monitoring SEL programming prevented the sample being from limited to principals which could significantly decrease the sample size. The SEL program leader could have one of a variety of titles, such as assistant principal, coordinator, teacher, or mental health worker. With a small number of cases to study in Colorado, each completed questionnaire was important. There were, however, potential respondents that were excluded from the definition of “school leader” in charge of SEL implementation. The survey requires respondents to declare that they are in fact in charge of SEL implementation themselves and not a proxy respondent. Responding honestly to this filter question deterred respondents not directly in charge of the initiative, which could have excluded an administrator or principal that appointed the project’s leader but initially felt obliged to be the respondent because of organizational rank.
In addition to overseeing SEL implementation, the respondents for the sample represented a rural district. Colorado is 104,185 square miles with a predominance of rural schools. A Colorado school district is determined to be rural with consideration to the size of the district and the distance from the nearest large urban/urbanized area. It also must have a student enrollment of 6,500 students or less. Small rural districts are those districts meeting these same criteria and having a student population of less than 1,000 students (CDE, 2018b).

Of the 178 school districts in Colorado, there were 108 districts meeting the “small rural” criteria. Another 40 districts were considered “rural,” so the potential sample was drawn from 148 rural school districts in Colorado (CDE, 2018a, 2018b). Within each rural district, there is a wide range of numbers of schools within districts, and therefore a varying number of school leaders eligible to participate in the study. Also, a school leader may be in charge of SEL implementation of one school or many. Therefore, determining the actual population of rural implementation leaders is not possible unless all responded, and all revealed how many schools for which they are responsible for SEL implementation. One hundred and eight districts, those considered “small rural” have four or less schools. All “rural” and “small rural” districts in Colorado combined account for about 15% of the total student population in Colorado’s 1,888 schools.

Often, SEL programming is implemented in all public school grade levels (Dusenbury et al., 2018; Weissberg et al., 2015), so schools of all grade-level configurations were contacted for the study. The individual school buildings included any combination of grade levels within the K-12. Limiting the sample to specific grade
configurations, such as K-12 elementary schools or middle school grades 6-8, could have unnecessarily narrowed the potential sample.

Public websites and directories were used to obtain contact information for the delivery of the questionnaire. Enrollment totals by district were available from the CDE. Contact was made with the schools named in the CDE database that fit the criteria or “rural” and “small rural.” School contact names are accessible from the CDE’s “School district/buildings and personnel” directory, available at the CDE website. To expedite the process, the researcher purchased a contact list from a private entity.

**Theoretical Perspective**

Scott (2012) stated that a researcher’s viewpoint is dependent on two matters--ontology and epistemology. Ontological matters refer to relationships, structures, mechanisms, events, happenings, and behaviors in the world which have an objective existence that receive the researcher’s focus. Epistemological matters refer to how the researcher can know or come to understand them. At one end of a continuum, he argued, is the belief in a real world, regardless of any attempts to know it. At the other end, efforts to know the world are mediated through paradigms and worldviews where there is no independent reality separate from our attempts to know it. An important aim of the study was to have respondents confirm known problems, motivators, and components of school programming, which put this study on the continuum where paradigms and worldviews are less vital, and objectivism is predominant.

Crotty (1998) describes objectivism as an epistemological view “that things exist as meaningful entities independently of consciousness and experience, that they have truth and meaning residing in them as objects,” and that careful research can attain
objective truth and meaning (pp. 5-6). For the proposed study, objective truth was important along with systematic methods. Durlak (2015) found that “Effective implementation does not occur naturally or spontaneously but requires the use of systematic methods specifically designed to increase the odds of program success” (p. 395). Therefore, it was appropriate to consider a positivist stance. Crotty (1998) described positivism as “objective through and through” and that “objects in the world have meaning prior to, and independently of, any consciousness of them (p. 27). The systemic nature of the CASEL model provided the ability for the study’s participants to verify their school’s use of known practices.

Equally, respondents had to make meaning of their situations and therefore created knowledge to answer survey questions. Scott (2012) stated that the classical form of empiricism says that all knowledge is derived from experience. The knowledge either causally derives from experience, or it is justified by experience. The second variant, “that knowledge that can be believed is justified only through experience--is considered to be more credible” (p. 108). What is known about SEL implementation is that there are implementation challenges known to inhibit rural school districts (Bryant, 2007; Culbertson & Billig, 2016; Mueller, 2008; San Antonio, 2018; Wimberly & Brickman, 2014). The respondents, when choosing to answer a question, were in effect justifying their knowledge based on their experience. Scott (2012) argued that it is possible to accurately describe the world “if correct procedures are followed, and these correct procedures comprise the observer or researcher bracketing out their preconceptions of the world and making an objective assessment of it. Language therefore can act as a neutral medium for describing the world” (pp. 108-109).
The survey research approach provided a similar framework for the research problem: known challenges exist for rural school implementation and known reasons for implementation typify SEL implementation. Using effective survey question language as a medium provided an opportunity for respondents to accurately verify these two variables.

Identification of Variables

Within the family of research variables, Creswell (2012) plainly described the dependent variable as the outcome the research is trying to explain. Participants in the proposed study responded to questions that determined how well SEL programming is established at their schools. The implementation level is the dependent variable that is the primary interest of the study. Levels of implementation were determined in the data analysis phase of the study. Respondents responded to questions that allowed the researcher to identify where their school is in the implementation process. Levels were determined based on the collective responses.

Two other variables measured with the survey were implementation challenges and reasons for implementation. Both of the independent variables to be measured are known to have impact on educational implementation quality (Durlak, 2015; Wanless, Groark, & Hatfield, 2015). As a result of the study, the description of the relationships between the three variables were used to determine their predictive value for future implementations in a similar study context.

1. Levels of SEL implementation
2. SEL implementation challenges
3. Reasons for implementation of SEL
Key Variables Defined

Key variables are listed in this section. Definitions are meant to provide clarity about the variable within the study’s context with the intent to establish their importance and role in data analysis. The primary endpoint was to consider the relationship between the dependent variable, levels of SEL implementation, and the two independent variables, implementation reasons and implementation challenges. Responding to a four-point Likert scale, school leaders were asked to verify how well, if at all, the four SEL components identified by CASEL are utilized at their schools. Responses about components established what “level” of implementation each school had accomplished. For each independent variable, reasons and challenges, there were many of each and will be enumerated in the data analysis section.

Participants responded to questions that determined what elements of SEL instruction are in place at their schools. Also, there were many reasons rural schools are implementing SEL programming. Leaders were asked, through the survey, what the reasons were for initiating the implementation of SEL.

1. Level of Established SEL Instruction. This variable was important to the study. The level as measured by the survey instrument created a dependent variable for correlation with implementation challenges and impetus for implementation. The levels were determined by verifying the existence in each school of the four competencies recommended by CASEL (2012): Teacher practices, curriculum integration, school-wide strategies, and free-standing lessons.

2. Challenges Associated with Implementing SEL. The nature of implementation is challenging. The challenges identified by participants served as
important information that may inform policy and best practice. Challenges were measured using a Likert scale that gauged degree of agreement.

3. Reasons Identified for Implementing SEL. Successful work involving school vision is associated with successful implementation. When low implementation levels are correlated with some implementation reasons more than others, that information becomes worthwhile for future implementation efforts. Reasons for implementation, which are described in the literature review in Chapter II, were measured using a Likert scale that gauged degree of agreement.

**Other Variables**

Other variables were demographic data for both the student population and respondents. Participant responses regarding SEL were correlated to their own demographic responses, as well as years of service and years in current position. Years of service equates more experience, and leaders with more practice may have different perspectives or levels of success (Marzano, Frontier, & Livingston, 2011). Leaders’ experience, then, was a known moderating variable, but the study was not evaluating the relationship between this variable and the dependent variable. To do so would have required the researcher to study how it moderates the relationship, and that is not a goal of the study. Other respondent characteristics surveyed were gender and race. Student characteristic data collected were the percentage of free and reduced lunch students, ethnicity, school enrollment, district enrollment, and ELL membership. These data were collected to perform multiple linear regression analysis to predict the value of the dependent variable, which was levels of SEL implementation.
Limitations

Durlak (2015) identified a potential issue in the specific context of studying SEL in schools. The potential for weak awareness of the topic’s variables on the part of participants threatened the internal validity of the proposed study’s findings. The study was limited by the inability to eliminate all bias. Bias can impact internal validity, which deals with the questions of how research findings match reality (Merriam, 2009).

In the proposed study, the participants responded with their perceptions of truth which can result in response bias. Response bias happens in survey research when responses inaccurately reflect the views of the sample and the population. What is happening that can be empirically observed could be different than the circumstances participants express due to personal beliefs or a lack of awareness of their situation (Creswell, 2012). Gray et al. (2007) found that “The motives behind what people report (and what they fail to report) about themselves are more complex than any pure desire to provide the researcher with an accurate account (p. 145).

Krumpal (2013) found that survey respondents under-report undesirable activities and characteristics and attitudes and over-report desirable ones. Gittelman, et al. (2015) stated that any multimode comparison of data should consider the effects of both sample selection and social desirability bias. Results can be misleading where the questions are subject to respondent self-monitoring. Their recommendation is to use only questions that respondents do not consider to be sensitive.

Social desirability definitely is a consideration for this study. With the school leader as a school’s sole survey respondent, an assumption is that participants’ answers are based on thorough and correct understanding of the dynamics of their schools,
communities, and staff. For example, the survey will gauge the leader’s view of the norms and staff culture in the school building. Issues related to a school’s deep culture may interfere with gathering accurate information. A school leader may claim the work environment is positive, yet in truth the staff is unhappy and unwilling to express opinions that are contrary to their leader’s.

The proposed study probed potentially sensitive issues, such as the reasons for implementing SEL. The researcher believed potential respondents may have chosen not to participate in questions regarding implementation challenges if their true feelings might not reflect well on someone in their position. Also, the survey respondent may not respond with that honest answer unless provided anonymity (Muijs, 2012), whereas this study offers only a level of confidentiality. Guaranteeing anonymity may have resulted in more honest answers.

To reduce social desirability bias, survey questions were vetted for language that might suggest the respondent is accountable for SEL implementation failures. Wellman and Lipton (2004) recommended using the “third point” approach when attempting to construct language that relieves pressure from the respondent. The concept is to phrase questions that focus on a source other than the asker or the respondent. This creates focus on the problem and other contributors to the issue, which essentially discharges the respondent of perceived responsibility for the problem.

Many other steps were taken to reduce response bias. The researcher asked local school leaders to view survey questions and determine if the language in the questionnaire seemed appropriate for the audience. The language reflected the type of language the target group uses. Second, I used the same colleagues to vet questions.
There needed to be certainty that items did not ask two questions in one item or have inherent bias such as leading questions. Also, not providing enough answers could have resulted in respondents abandoning surveys or skewed results. Further, the researcher performed informal inquiries to create certainty that the correct target audience has been identified. Ultimately, the study may be limited by the potential for response bias, which could impact internal validity, which attends to the question of how research findings match reality (Merriam, 2009).

**Survey Instrument**

A web-based questionnaire using the Qualtrics online survey platform was the sole data collection instrument. Using Qualtrics data distribution software, a link to an electronic questionnaire was sent to rural Colorado school leaders that will resulted in the examination of their responses to questions about SEL programming in their schools. The survey (Appendix C) was administered to public school leaders that resulted in the examination of their responses to questions about SEL programming in their schools. Emailed instructions accompanied an internet link that stated that the person responsible for administering and monitoring SEL should complete the survey (Appendix D).

The lack of an existing survey is a challenge for the researcher who had to generate an original questionnaire. The survey’s first question screens respondents. In the event the email is delivered to the wrong person, perhaps due to shifts in staff responsibilities or employment status, the survey’s instructions asked the recipient to deliver the survey to the leader of SEL programming. The respondent then declared his or her title and role in survey answers and completed the survey. Key definitions were
provided to the respondent to improve chances for a common understanding of SEL (Appendix E).

Three types of responses were collected by the survey-- Likert scale level of agreement and frequency, fill-in-the-blank for limited demographic questions, and multiple choice. The first four questions asked the respondent to provide information about him or herself. These were title or role, gender, years at the school in that role, and total years of service in that role. The next seven questions asked about the staff and students--how many educators, total student enrollment in the district and school, grade configuration, free and reduced lunch recipients, number of English Language Learner students, and student race. The model for demographic questions were modeled after the U.S. Census survey. Therefore, the term “race” is used rather than ethnicity.

When the respondents returned the data, the total enrollment requested in the survey sometimes did not match exactly the number recorded by the CDE. Each respondent possibly was in charge of a limited number of buildings within the district, therefore reporting a smaller number than the total listed publicly. This would impact the ability to compare responses by school or district unless the respondent provides the name or names of school buildings at the end of the survey. Many did not.

In the sections that follow, the constructs of the study--reasons, challenges, and implementation levels--were surveyed. In the second section, respondents self-reported the school’s status regarding SEL programming. Twelve questions (Q19-Q30) utilized a Likert frequency scale to indicates the school’s implementation status. The questions asked about school-wide and classroom practices. Four questions were reverse coded to maximize reliability of responses.
The third section queried respondents’ opinions regarding reasons for implementation. Two questions (Q15-16) rated eight implementation reasons using a four-point Likert agreement scale. The reasons were divided into two categories-- (a) internal, which measurable student outcomes and future benefits to student and (b) external influences, those made far from the point of implementation.

The first category of reasons asked about SEL’s potential benefits to students: (a) To mitigate negative student behavior, (b) To help close achievement gaps, (c) To better prepare students for life as adults, and (d) To address the needs of students with significant social-emotional deficits. Because literature supported the idea that all the reasons are often reasons to implement SEL, the researcher desired to know how each could predict implementation levels. An additional response of “other” is included for each of these questions in the event the listed reasons were not complete lists in the eyes of the respondent.

The second category of reasons involves the following external influences: (a) educational or curriculum mandates, (b) community pressure to reduce behaviors such as bullying, suicide, and crime, and (c) recommendation(s) from other school(s). The first reason, mandates, was a viable reason based on recent developments in legislation related to SEL at both the state and federal level. As described in earlier chapters, many states in America recommended SEL programming but most have not articulated specific programming. Some required elements of SEL, such as PBIS or RTI interventions and instructional programming. Mandates also come from school boards, superintendents, or from the state level. The 2015 federal legislation, ESSA, gave more control to states, which have in turn used the new flexibility to strengthen SEL-related policies and
programs (CASEL, 2019). The second reason is that communities may be pressuring schools to act. This pressure falls short of being a mandate but has motivated school boards to act. The public outcry to curb suicides and bullying certainly is an example. According to the Centers for Disease Control and Prevention, the suicide rate has climbed 33 percent since 1999. More than 47,000 Americans killed themselves in 2017. According to the U.S. Department of Education (2016), one of five students in bullied annually.

The third reason measures the influence of the recommendations from other schools. Professional networks where members are building-level staff such as teachers and principals have always been an influential aspect of education. Bridgeland, Bruce, and Hariharan (2013) found that teachers value SEL, believe it helps students achieve in life and school, and can identify key accelerators for SEL. They desire improved and increased professional development and look to SEL for its relational benefits in the classroom.

For challenges of implementing SEL, the challenges from the literature review were coded into six categories that account for a much greater number of challenges identified in prior research. One survey question (Q17) will capture ratings of all six challenges. The categories for the challenges variable were (a) economic barriers; (b) geographic isolation; (c) SEL competes with other school priorities; (d) recruiting, training, and retaining teachers; (e) school/district culture, willingness, or efficacy; and (f) lack of stakeholder support or community partnerships.

It was important to determine levels of implementation as accurately as possible to correlate implementation impetus and challenges. Four additional questions for
challenges were re-coded. Verification of consistent answers added additional reliability to the instrument.

At the end of each survey section, a written option was provided to capture any information that the respondent determined the survey failed to ask. Also there was a question at the end of the survey asking for names of specific SEL programs being implemented. The final question allows entry of the name of the school building for which the respondent is answering.

**Data Collection Procedures**

This section includes description of data collection and identification of data that were collected. The electronic responses were collected and stored in the Qualtrics online system. The questionnaire’s content categories aside from demographics--implementation, impetus, and challenges--were aligned to the research questions to meet the goals of the study. Further details of the research questions’ definitions were provided and meant to provide clarity in the questionnaire’s purpose.

The data collection preparation process included a field test prior to administration to participants. I utilized convenient pilot participants, those nearby colleagues willing to complete the survey. Although only a few of the pilot group had experience as rural principals, I was able to use their feedback to make changes in the survey that improved the likelihood of accurate surveys. These pilot participants were not the same people who were asked to complete the survey for the study.

**Research Timetable**

Creswell (2012) recommends several strategies to encourage high rates of response--pre-notification, follow-up procedures, and clear instrument constructions, and
modest incentives. This format should allow a researcher to complete the data collection in six weeks (p. 391). The data collection process for the study began in July of 2019 and concluded in January of 2019. Data analysis was completed in March of 2020.

For the actual questionnaire distribution, I obtained rural school principals’ contact information through the use of public directories and a private distributor as stated in the previous section. Creswell (2009) recommends asking for participant cooperation prior to sending the survey. I sent the email message with the survey link May 20 requesting the recipient’s participation. The email stated respondents’ eligibility for a $50 Amazon gift card. Hawley, Cook, and Jensen-Doss (2009) found that offering respondents $5 yielded significantly higher response rates than respondents not receiving the offer of incentive. Potential respondents were informed in the initial email that they would be entered in the drawing upon receipt of their completed survey.

I utilized Qualtrics to improve the response rate. Survey links were sent May 20, 2020, using the Qualtrics delivery system. Two weeks later, June 3, non-respondents received a second questionnaire. After another two weeks, I contacted school leaders using personalized emails asking for their cooperation in completing the questionnaire.

Prior to the process that began on May 20, I contacted Colorado BOCES, the Colorado Rural Collaborative, and the Generation Schools Network to describe the study and ask for their support. Although these are informal requests, the informal school leader network provided some cooperation with participation to counter a potentially low response rate. A target response rate of 30% was desired to achieve an acceptable level of statistical confidence. If this rate is not met after the planned measure to receive
responses, I will send a return envelope with postage and paper survey to non-responding schools.

**Data Analysis**

After deactivating the survey in Qualtrics, the survey data were exported to an Excel CSV file and stored on the researcher’s home computer. Data then were imported into SPSS. A backup copy of the original file was saved prior to analysis of the data.

Data screening included the descriptive statistics for all variables. Descriptive statistics are used to present quantitative descriptions in a manageable form. They helped describe, show, or summarize data in a way that might reveal patterns that emerge from the data. Descriptive statistics do not, however, allow us to make conclusions beyond the data we have analyzed or reach conclusions regarding any hypotheses. They are simply a way to describe the data. The results of this study provide data about two variables that impact levels of SEL implementation.

I sought to understand this relationship between variables with the objective of being able to describe their relationships and make useful recommendations about SEL implementation practice and further research. Therefore, inferential statistics provided a deeper understanding of correlations between variables. Multiple linear regression was used to model the relationship between the explanatory and response variables and to predict the value of levels of implementation based on the value of impetus for implementation and challenges to implementation.

For this study, data were drawn from the survey results. Before importing the survey data into electronic data files, coding was completed. Data validation ensured that the survey questionnaires are completed and present consistent data. Internal consistency
reliability analysis will be used. In reliability analysis, internal consistency was used to measure the reliability of a summated scale where several items are summed to form a total score. This measure of reliability in reliability analysis focuses on the internal consistency of the set of items forming the scale. An average inter-item correlation was obtained by taking all the items on a test that probed the same construct, determining the correlation coefficient for each pair of items. Then the average of all of the correlation coefficients provided the average inter-item correlation (Wells & Wollack, 2003).

Questions not completed by most respondents were not used in the data analysis as this would result in bias in the results (Muijs, 2012). In the case of incomplete questionnaires, the actual number of respondents that were able to answer a particular question will be counted to determine if the sample group is large enough to include the data in the findings.

Measures of central tendency and measures of dispersion are the two types of descriptive statistics. For the data collected, which include ordinal and nominal data, univariate analysis was used to examine cases one variable at a time. Measures of central tendency will be identified, as well as the dispersion measures of range, variance, and standard deviation.

The survey requested that school leaders answer about implementation of SEL in their schools. Participants responded to questions that determine whether their current circumstance fits the definition of “established SEL instruction.”

The demographic variables of respondents’ gender, title, years as SEL leader, and years as a school administrator were analyzed for frequency of response. The student and school variables of enrollment, grade configuration, free-and-reduced meal recipients,
and number of ELL students were analyzed for frequency of response in order to describe and compare respondents’ settings.

**Conclusion**

The purpose of this chapter was to provide information regarding the purpose of the study and the methods for the collection and analysis of the survey data. The goal of the study was to understand and describe impetus and challenges for SEL implementation in relation to levels of SEL implementation to see if the independent variables’ influences have predictive value.

The findings of the study can benefit many aspects of social-emotional education. School leaders may benefit from the knowledge gained from the study, which could be used to inform future implementations. Policy makers may gain a better understanding of the challenges and what is required to implement and maintain SEL implementation. Classroom teachers can better understand their role in implementation and maintenance of the four competencies identified by CASEL (2012). Finally, the students themselves can benefit from high quality programming when it is effectively implemented and maintained (Durlak, 2015).
CHAPTER IV

RESULTS

This chapter presents the quantitative results to address the research questions:

Q1  Do implementation challenges identified by rural Colorado school leaders predict levels of implementation?

Q2  Do the impetuses identified by rural Colorado school leaders for implementing SEL predict levels of implementation?

This section presents the results of descriptive analyses: (a) frequencies for demographic information and participant characteristics (i.e., years of service, title, years in current role, pupil demographics), (b) levels of implementation, (c) descriptive statistics for the remaining independent variables (i.e., reasons for implementation, challenges in implementation, and (d) indicators of genuine implementation. Also, this section will show how two groups were created based on their responses to implementation levels. On a scale of one through four, schools choosing Individuals’ responses were correlated with indicators of genuine implementation to help determine how accurately respondents self-rated their level of implementation. Further correlations were made between levels of implementation and the study’s primary independent variables--reasons to implement and challenges characteristic of SEL implementation. Individuals’ responses were analyzed to see if certain impetuses or barriers were predictive of successful implementation.
Preliminary Analysis

The population of this study was Colorado rural schools principals or other educators that led implementation of SEL for their school or schools. The researcher estimated that there were 441 potential school building participants from 148 rural school districts in Colorado. The survey asked that the person in charge of SEL implementation should respond to the survey. One-hundred fifty-eight surveys were returned for a 36% response rate. Forty-five responses indicated they were not implementing SEL at the time of the survey, or they did not supply enough data to be included. One-hundred thirteen (72%) of the 158 responses were viable for study. This fell short of the target goal of 206 responses. The viable responses represented 38 small rural districts and 27 rural districts, for a total of 65 out of 148 districts (43.9%). Inspection of the individual respondents’ locations and demographics indicated the sample is representative of all enrollment ranges of rural schools as well as a variety of geographic areas where Colorado rural schools are located.

Respondents

Of the 113 viable responses, school principals represented the largest group of respondents with 97 (86%; see Table 1). Respondents were 49.6% of respondents female and 47.8% were male. The levels of professional experience in the respondents’ current position were distributed from first-year administrators to veterans with 20 years of experience ($M = 6$).
Table 1

**Respondent Demographics**

<table>
<thead>
<tr>
<th>Title</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>97</td>
<td>85.8</td>
</tr>
<tr>
<td>Superintendent/Principal</td>
<td>6</td>
<td>5.3</td>
</tr>
<tr>
<td>Superintendent</td>
<td>5</td>
<td>4.4</td>
</tr>
<tr>
<td>Other non-classroom educator</td>
<td>3</td>
<td>2.7</td>
</tr>
<tr>
<td>Classroom teacher</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>Licensed mental health care worker</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>113</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>57</td>
<td>57.0</td>
</tr>
<tr>
<td>Male</td>
<td>55</td>
<td>55.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>112</td>
<td>112.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years of SEL completed</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>First year</td>
<td>21</td>
<td>18.6</td>
</tr>
<tr>
<td>2-4 years</td>
<td>53</td>
<td>46.9</td>
</tr>
<tr>
<td>More than 4 years</td>
<td>39</td>
<td>34.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>113</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Respondents reported how many years they completed as the person in charge of implementing SEL at their current schools. Thirty-nine (33.9%) respondents served more than four years in this position. Fifty-three (46.1%) served 2-4 years in their current
positions, and 21 (18.3%) were in their first year as administrator of implementation of SEL.

The number of certified teachers in the building or buildings for which the respondent administered SEL was divided into four categories--0-20, 21-40, 41-60, and 61-80. Forty-seven (40.9%) housed 0-20 teachers. Fifty-four (47%) housed 21-40 teachers. Eight (7%) had 41-60 teachers, three (2.6%) had 61-80 teachers, and one school (.9%) had more than 80 teachers.

Settings

Survey respondents provided information about their students. Included were total pupil membership, race and ethnicity, and the range of students receiving free and reduced meals (see Table 2). Because of the diverse settings of rural schools, respondents were also asked about their current grade level and building configurations.

Pupil membership totals, or student enrollments, were reported. Nine respondents (7.8%) were in schools with 50 or less students. Eight (7%) said they had 51-100 students. Twenty-four (20.9%) responded with 101-200. Twenty-two (19.1%) reported 201-300. Twenty-one (18.3%) reported 301-400 and 29 (25.2%) said 401 or more were enrolled in their schools.

Free and reduced meal ranges were split in quartile percentages. Twelve schools (10.6%) reported 0%-25% of their population received free or reduced meal prices. Fifty-three (46.9%) schools were in the 26%-50% range. Thirty-one (27.4%) were in the 51%-75% range, and 16 (14.2%) were in the 76%-100% range.
Table 2

*School Demographics*

<table>
<thead>
<tr>
<th>Enrollment</th>
<th>$f$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 or less</td>
<td>9</td>
<td>8.0</td>
</tr>
<tr>
<td>51-100</td>
<td>8</td>
<td>7.1</td>
</tr>
<tr>
<td>101-200</td>
<td>24</td>
<td>21.2</td>
</tr>
<tr>
<td>201-300</td>
<td>22</td>
<td>19.5</td>
</tr>
<tr>
<td>301-400</td>
<td>21</td>
<td>18.6</td>
</tr>
<tr>
<td>401 or more</td>
<td>29</td>
<td>25.7</td>
</tr>
<tr>
<td>Total</td>
<td>113</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Free/Reduced</th>
<th>$f$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%-25%</td>
<td>12</td>
<td>10.6</td>
</tr>
<tr>
<td>26%-50%</td>
<td>53</td>
<td>46.9</td>
</tr>
<tr>
<td>51%-75%</td>
<td>31</td>
<td>27.4</td>
</tr>
<tr>
<td>76%-100%</td>
<td>16</td>
<td>14.2</td>
</tr>
<tr>
<td>Unreported</td>
<td>1</td>
<td>9.0</td>
</tr>
<tr>
<td>Total</td>
<td>113</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ELL</th>
<th>$f$</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%-25%</td>
<td>79</td>
<td>69.9</td>
</tr>
<tr>
<td>26%-50%</td>
<td>22</td>
<td>19.5</td>
</tr>
<tr>
<td>51%-75%</td>
<td>10</td>
<td>8.8</td>
</tr>
<tr>
<td>76%-100%</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>Unreported</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>Total</td>
<td>113</td>
<td>100.0</td>
</tr>
</tbody>
</table>
For English Language Learner ranges, few schools had large populations. One (.9%) school had 76%-100% ELLs. Ten (8.8%) schools had 51%-75% ELLs. Twenty-two (19.5%) schools had 26%-50% ELLs. In 79 (69.9%) schools, 0%-25% students were ELLs.

Respondents indicated grade levels or building configurations for which they were the SEL administrator. More than one area could be selected, so the total selections exceeded the N group. Twenty-one schools included pre-school, 57 included elementary school, 28 included middle school, 32 included high school, 18 were K-12 schools, and no one indicated a K-8 implementation. In addition to declaring building configurations, respondents were asked to name all levels that were included in their actual implementation, since the researcher anticipated that not every K-12 school, for instance, would implement at all levels. Survey responses were represented by all grade levels from kindergarten through grade 12. Thirty-six (32%) of participants responded on behalf of elementary schools only. High schools were represented in 17 responses (15%). Fourteen responses (12%) represented preschool and elementary schools. Another 14 (12%) represented three levels--elementary, middle, and high schools. Thirteen (12%) represented middle schools only. Nine (8%) represented middle and high schools. Five represented PreK-12. One response represented pre-school only. One represented pre-school and high school. One represented elementary and middle schools.

**Student Race**

Seventy-seven respondents (68%) reported their student school membership as Anglo as the majority with Hispanic students being the second largest group in their schools. Seventeen (15%) schools reported Hispanic students as the majority with Anglo
student as the second highest population. One school reported Hispanic student population as the majority with Native American as the second most represented and no Anglo students (see Table 3).

Table 3

<table>
<thead>
<tr>
<th>Student Race/Ethnicity</th>
<th>Students</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>White or Anglo-American</td>
<td>19,914</td>
<td>63</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>9,899</td>
<td>31</td>
</tr>
<tr>
<td>Two or more races</td>
<td>780</td>
<td>2</td>
</tr>
<tr>
<td>Native American or Alaskan Native</td>
<td>388</td>
<td>2</td>
</tr>
<tr>
<td>Black or African American</td>
<td>279</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Asian</td>
<td>225</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Native Hawaiian or Other Pacific Islander</td>
<td>49</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>PK-12 Total</td>
<td>31,534</td>
<td>100</td>
</tr>
</tbody>
</table>

Implementation Levels

Important to the study was the possibility that respondents from schools with high or low implementation levels might consistently name certain challenges or reasons. Identifying these could suggest they have predictability that could inform future implementations. Two groups were created from the 113 responses. The mean implementation score ($M = 2.70$, $SD = .889$) slightly higher than the middle scored of 2.5. The selection $k$ between the low group, which consisted of 48 (42.5%) respondents and the high group of 64 (56.6%).
With “levels of implementation” being the primary variable of interest, the respondents were asked how well implemented SEL is in their settings, with the four possibilities being “just beginning,” “partially implemented,” “mostly implemented,” and “fully implemented.” Nine (8%) chose just beginning, 39 (34.5%) chose partially implemented, 41 (36.3%) chose mostly implemented, and 23 (20.4%) considered themselves fully implemented.

**Verifying Implementation Levels**

To verify implementation levels for both groups, the survey asked 12 questions where respondents rated the frequency with which their teachers and schools used practices and systems that would indicate they in fact are achieving implementation. Respondents chose the frequency on a Likert scale indicating whether practices and systems were used “rarely or never,” “some of the time,” “most of the time,” “always or almost always,” or “unsure.” Eight of the 12 questions were reworded to check reliability of answers.

Seven Likert scale questions asked about teacher and student efforts in the classroom. Respondents also were asked if teachers use active forms of learning such as cooperative learning and asked if the SEL activities they use are coordinated and connected. Also, do teachers target specific SEL skills? Do students work together to create meaning of the lessons? Are lessons integrated into other subjects? Do teachers also use free-standing lessons to teach SEL? Do the SEL components emphasize personal and emotional skills? For the low implementation group, scores ranged from 2.10 to 2.38. The high group means ranged from 2.58 to 3.11 (see Appendix F).
The following survey items that correlated positively with implementation levels are written out here with their corresponding question number and correlation coefficients. For Question 19: The teachers at our school utilize free standing lessons designed to enhance students’ social and emotional competence explicitly $r(64), .274, p = .028$ (see Appendix G). For Question 24: Teachers in our school utilize connected and coordinated sets of SEL activities to foster skill development $r(62), .379, p = .002$. For Question 25: Teachers in our school utilize an SEL component that emphasizes developing personal and social skills $r(63), .348, p = .005$. For Question 26: Teachers in our school teach SEL by targeting specific social and emotional skills $r(63), .429, p < .001$. For Question 28: At our school, students interact with each other to create meaning of the social-emotional skills taught to them $r(63), .360, p = .004$. For Question 30: The culture in the school district supports the development of students’ social and emotional skills $r(63), .249, p = .049$.

Questions 19, 24, 25, and 26 all assessed whether the schools have free-standing lessons designed to enhance student’s social and emotional competence explicitly. Questions 20, 23, and 28 gauged whether teachers use practices such as cooperative learning and project-based learning which specifically promote SEL. Question 21 attempted to determine whether or not SEL is integrated into academic curriculum such as language arts, math, social studies, or health. Questions 22, 27, 29, and 30 asked about organizational strategies the school has in place to create a climate and culture conducive to the promotion of SEL (Appendix H).
Independent Variables

Two variables were of primary interest in the study that may have had important impact on levels of SEL implementation. They were the challenges that may have impacted implementation efforts and the reasons or impetus for implementing SEL. Eight reasons and six challenges were measured in the survey. The reasons were split into two groups--internal influences and external influences. The internal influences were more student centered than the external influences. Challenges were diverse, so no categories were made.

Reasons for Implementation

Five of the reasons applied specifically to the students (see Table 4) and were reasons that came from the staff perceptions as reported in the survey by the school’s SEL administrator. The range of means were from $M = 3.03$ to $M = 3.67$. The five in-house, or internal, reasons were (a) to help close student achievement gaps ($M = 3.03$, $SD = .895$), (b) to better prepare students for life as adults ($M = 3.60$, $SD = .738$), (c) to address the needs of students with significant social-emotional skill deficits ($M = 3.58$, $SD = .832$), (d) to mitigate negative student behavior ($M = 3.38$, $SD = .674$), and (e) student need perceived by school or district staff ($M = 3.67$, $SD = .604$).
Table 4

*Implementation Reasons*

<table>
<thead>
<tr>
<th>Reasons</th>
<th>M</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation Level</td>
<td>2.70</td>
<td>.889</td>
<td>112</td>
</tr>
<tr>
<td>Perceived need*</td>
<td>3.67</td>
<td>.604</td>
<td>113</td>
</tr>
<tr>
<td>Address deficits*</td>
<td>3.67</td>
<td>.592</td>
<td>110</td>
</tr>
<tr>
<td>Life preparation*</td>
<td>3.63</td>
<td>.658</td>
<td>112</td>
</tr>
<tr>
<td>Mitigate behavior*</td>
<td>3.38</td>
<td>.674</td>
<td>112</td>
</tr>
<tr>
<td>Achievement gaps</td>
<td>3.03</td>
<td>.895</td>
<td>112</td>
</tr>
<tr>
<td>Community pressure</td>
<td>2.63</td>
<td>.890</td>
<td>112</td>
</tr>
<tr>
<td>Mandates</td>
<td>2.24</td>
<td>.947</td>
<td>110</td>
</tr>
</tbody>
</table>

*Internal Reasons*

The source of the other three reasons for implementation were influences more external in origin, such as those from policy makers (see Table 4). All external reason scores were lower than the internal reason scores. They were (a) educational or curriculum mandates ($M = 2.20$, $SD = .985$), (b) Community pressure to reduce bullying, suicide, and crime ($M = 2.61$, $SD = .920$), and (c) recommendations from other schools ($M = 1.73$, $.938$). The mean of the five in-house reasons was 3.45, and the three external reasons’ mean was 2.18.

Of all reasons, “perceived need” had the highest mean score ($M = 3.67$, $SD = .604$). It also the greatest number of “very influential” responses. Eighty-three (73.5%) said this reason was very influential; twenty-four (21.2%) said it was somewhat
influential; five (4.4%) said it was slightly influential. One (.9%) said it was not at all influential.

“Preparing students for life as adults” had the second highest mean \((M = 3.60, SD = .738)\) and the third highest total for “very influential.” Eighty (70.8%) respondents said preparing student for life was a very influential reason for implementing SEL; 25 (22.1%) said it was a somewhat influential reason; 5 (4.4%) said it was slightly influential. Two (1.8%) found it not at all influential.

“Addressing significant student social-emotional deficits” had the third highest mean \((M = 3.58, SD = .832)\) and the third highest count for the “very influential” category. Eighty-one (71.7%) respondents found the reason very influential; 22 (19.5%) found it somewhat influential; 7 (6.2%) said it was slightly influential. Three (2.7%) said it was not at all influential.

Fifty-five (48.7%) found mitigating negative student behavior as a very influential reason for implementing SEL. Forty-five (39.8%) said it was somewhat influential. Twelve (10.6%) said it was slightly influential. No respondents said it was not at all influential.

For the response option, “closing student achievement gaps,” “somewhat influential” was the most chosen response. Thirty-nine respondents (34.5%) cited closing gaps as a very influential reason. Forty-three (38.1%) said somewhat influential, 25 (22.1%) said slightly influential, and 4 (3.5%) said not at all influential.

**Implementation Challenges**

The second independent variable was the challenges implementing SEL. Six challenges were measured in the survey. On a scale of one to four, the range of means
was $M = 1.98$ to $M = 2.75$ (see Table 5). The average of the challenges’ mean scores combined was 2.39.

Table 5

*Implementation Challenges*

<table>
<thead>
<tr>
<th>Challenges</th>
<th>$M$</th>
<th>$SD$</th>
<th>$N$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priorities compete</td>
<td>2.75</td>
<td>.892</td>
<td>113</td>
</tr>
<tr>
<td>Recruit/train teachers</td>
<td>2.72</td>
<td>1.015</td>
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<td>Implementation level</td>
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<td>Geography</td>
<td>2.39</td>
<td>1.043</td>
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<tr>
<td>Culture/willing/efficacy</td>
<td>2.08</td>
<td>.978</td>
<td>112</td>
</tr>
<tr>
<td>Lack of stakeholder support</td>
<td>1.98</td>
<td>.954</td>
<td>113</td>
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</tbody>
</table>

For economics, 11 (9.7%) said economics were a major challenge. Twenty-five (22.1%) said moderate challenge. Thirty-eight (33.6%) said somewhat of a challenge. Thirty-eight (33.6%) said economics were not a challenge. For geography, 20 (17.7%) said geography was a major challenge. Thirty-one (27.4%) said it was a moderate challenge. Thirty-four (30.1%) said it was somewhat of a challenge. Twenty-seven (23.9%) said it was not a challenge. Twenty-four (21.2%) said a major challenge was that SEL had to compete with other school priorities. Forty-seven (41.6%) said it was a moderate challenge. Thirty-two (28.3%) said it was somewhat of a challenge. Ten (8.8%) said it was not a challenge. Recruiting, training, and retaining teachers was another challenge. Thirty-one (27.4%) said it was a major challenge. Thirty-four (30.1%) said it was a moderate challenge. Thirty-two (28.3%) said it was somewhat of a challenge.
Fifteen (13.3%) said it was not a challenge. Eleven (9.7%) said “school/district culture, willingness, or efficacy” was a major challenge. Twenty-five (22.1%) said it was a moderate challenge. Thirty-eight (33.6%) said it was somewhat of a challenge, and 38 (33.6%) said it was not a challenge. For “lack of stakeholder support,” 9 (8.0%) said it was a major challenge. Twenty-three (20.4%) said it was a moderate challenge. Thirty-eight (33.6%) said it was somewhat of a challenge. Forty-three (38.1%) said it was not a challenge.

**Correlations**

Pearson correlation coefficients measured the relationship between implementation levels and implementation reasons and challenges. Three reasons correlated positively with implementation levels when all respondents are included (see Table 6): (a) Perceived need $r(112) = .280, p = .003$, (b) preparing students for life $r(112) = .276, p = .003$, and (c) community pressure $r(112) = .232, p = .014$. There were no significant correlations between levels of implementation and challenges for the whole group (see Table 7). When the high implementation group $N = 64$ and low group $N = 48$ were separated, there were significant correlations.

**Implementation Groups**

For the low implementation group (see Appendix I), only one reason, perceived need, correlated positively with implementation levels at a significant level $r(48), .535, p = <.001$. No challenges correlated significantly. For indicators of implementation of needed systems, common planning time correlated negatively with implementation levels $r(48), -.434, p = .002$ for the low group. For the high implementation group (see Appendix D), neither reasons for challenges showed significant correlations.
<table>
<thead>
<tr>
<th>Implementations Reasons Correlations with Implementation Levels</th>
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<th>(5)</th>
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<td>(3) Life Prep</td>
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Table 6 (continued)

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* Correlation is significant at the 0.05 level (2-tailed), ** Correlation is significant at the 0.01 level (2-tailed)
<table>
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<tr>
<th></th>
<th>(1) Implementation</th>
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<th>(3) Geo</th>
<th>(4) Priorities</th>
<th>(5) Recruit</th>
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<td>.002</td>
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<td>.002</td>
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<td>.288**</td>
<td>.002</td>
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<td>.418**</td>
<td>.280**</td>
<td>.318**</td>
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<td>.000</td>
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<td>Sig. (2-tailed)</td>
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<td>.318**</td>
<td>.418**</td>
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<td>.001</td>
<td>.000</td>
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Table 7 (continued)

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<th>(7) Willing</th>
<th>(8) Support</th>
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<tbody>
<tr>
<td>(6) Pearson</td>
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<td>0.319**</td>
<td>0.287**</td>
<td>0.418**</td>
<td>0.376**</td>
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</tbody>
</table>

* Correlation is significant at the .05 level (2-tailed); ** Correlation is significant at the 0.01 level (2-tailed)
Regression

Multiple regression analyses were conducted to develop a model for predicting implementation levels from two predictors--reasons and challenges. Reasons were grouped by nature of being internal or external. Reasons considered internal were those typically made in a school or classroom by educators directly involved with direct SEL instruction. External reasons are those typically decided by policy makers or educators or community members further from the classroom and school. Challenges in this study were combined as a single category and variable for this analysis.

As can be seen in Table 8, both external and internal reasons had positive regression weight while challenges had a negative weight. Descriptive statistics show that internal reasons were rated highest by respondents (M = 3.48, S.D. = .427), more than a point higher than external reasons (M = 2.26, S.D. = .670; see Table 9).

Table 8

<table>
<thead>
<tr>
<th>Predictor</th>
<th>b</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>Sig.</th>
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<tr>
<td>(Constant)</td>
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<td>.704</td>
<td>.481</td>
<td>.632</td>
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<tr>
<td>Challenges</td>
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<td>.124</td>
<td>-.019</td>
<td>-.204</td>
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<tr>
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<td>.194</td>
<td>.295</td>
<td>3.168</td>
<td>.002</td>
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</table>
Table 9

Descriptives

<table>
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<tr>
<th>Implementation Level</th>
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<th>SD</th>
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<td>Challenges</td>
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Reliability

Reliability analysis illustrated a variety of levels of acceptability (see Table 10).

Per George and Mallery (2003), Cronbach’s reliability coefficient for reasons was poor (α = .567). For SEL systems, the level was questionable (α = .614). For challenges, the level was acceptable (α = .765), and for classroom practices the level was good (α = .882). For the combined coefficient of the questions, the level was acceptable (α = .756).

Table 10

Reliability

<table>
<thead>
<tr>
<th>Question Type</th>
<th>Cronbach’s Alpha</th>
<th>Cronbach’s Alpha Based on Standardized Items</th>
<th>Number of Items</th>
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<tbody>
<tr>
<td>Reasons</td>
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<td>.567</td>
<td>8</td>
</tr>
<tr>
<td>Challenges</td>
<td>.765</td>
<td>.764</td>
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<tr>
<td>Classroom Practices</td>
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<td>.882</td>
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<tr>
<td>Systems</td>
<td>.614</td>
<td>.627</td>
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<tr>
<td>Combined</td>
<td>.756</td>
<td>.765</td>
<td>27</td>
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</tbody>
</table>
Written Responses

Respondents were asked to name programming that supports SEL in their districts. Seventy respondents named 48 specific programs (see Table 11). Second Step and Sources of Strength were reported as being used the most. Twenty-two respondents named Second Step, and 12 named Sources of Strength. PBIS and 7 Mindsets were named nine times each. Capturing Kids Hearts and Restorative Practices were names six times each. The Kelsoe’s Choices program was named five times. Why Try and School Connect were named four times each. Five programs were named three times apiece. Fifteen programs were named twice each. Thirty-nine programs were named only once.

Table 11

<table>
<thead>
<tr>
<th>Programs Named</th>
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<tbody>
<tr>
<td>Second Step</td>
<td>22</td>
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<tr>
<td>Sources of Strength</td>
<td>12</td>
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<tr>
<td>7 Mindsets</td>
<td>9</td>
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<tr>
<td>PBIS</td>
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<tr>
<td>Restorative Practices</td>
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</tr>
<tr>
<td>Capturing Kids Hearts</td>
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<tr>
<td>Kelsoe's Choices</td>
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<tr>
<td>Why Try</td>
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<tr>
<td>School Connect</td>
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</table>
At the end of survey sections, respondents were provided space to write in anything they would like to add. Nineteen of 113 left responses, the longest being four sentences long. The responses had little in common in terms of themes. Three clarified that their programs were grant-funded. Four described which staff members delivered the SEL content.

Three responses said counselors deliver their SEL lessons. Two of those respondents said counselors delivered the lessons monthly. One of those two respondents considered the school “mostly implemented.” The other respondent selected “mostly implemented.” The third respondent, who said the school was “partially implemented,” said teachers can, if they choose, supplement the counselor’s efforts.

**Limitations**

There were limitations to the study regarding the sample and sample size. Of the 441 invitations, only 191 responded, and 163 submitted surveys for an 83% completion rate. However, because respondents had to be involved in active implementation of SEL, only 116 met that criterion and provided enough data to be included in the study. One hundred thirteen responses were complete surveys. It is difficult to determine the actual potential pool of respondents without a complete survey of all rural schools. Based on responses for this study, it is clear the potential respondent pool is significantly smaller, since many administrators implement SEL for multiple buildings, sometimes all the schools in a smaller district. Other participants responded on behalf of a single building. Also, an administrator in some cases implemented only at a single level, such as elementary, perhaps within a K-12 building, while the other buildings were not currently involved in SEL implementation at all. While the number of school districts and
individual schools is constant, a wide variety of approaches to implementing SEL made the exact potential pool impossible to identify without receiving responses from every district to verify how many administrators are actually actively and currently implementing SEL.

Further, in some cases not enough information was collected to be certain which students are being served in a school community. Respondents were asked about grade configuration possibilities, but open-ended responses indicated that a small number of schools reported they were implementing in a small number of grades. For a school that chose “Primary/Intermediate” as the setting for SEL implementation, the respondent may be implementing only at third grade. Also, the open-ended questions revealed that an SEL administrator was responsible for implementing SEL for all K-12 students, but the respondent was principal for only the middle school, for instance. The likelihood, then, is that the responses about teacher activities and culture applied to the respondent’s immediate experience, which would be the middle school building.

In some returned surveys, there were unanswered questions that eliminated some of the survey responses from being included. The survey was conducted online instead of face-to-face. As with all surveys, there is the possibility of different interpretations of the questions.

Some aspects of the data required complex analyses and beyond the scope of the study. With eight reasons, six challenges, and 12 questions asking respondents to verify implementation components, a large number of combinations could have impacted implementation and were not proposed for answering the research questions.
Student demographic data were drawn from the CDE to verify respondents’ answers. A great deal of the numbers reported by SEL administrators did not match those of the CDE. CDE numbers were used in the data analysis. The incorrect reports could be attributed to a number of situations. The school may have numbers more current than the CDE, which only receives enrollment reports from schools annually. The problem of not having the most current data may be especially true for districts where enrollment fluctuates due to higher numbers of transient families. Another possibility is that the incorrect numbers reflect unconscientious responses, which may be an indicator that inaccurate answers may have happened elsewhere in the survey. If not inaccuracy or carelessness, there is always a chance of respondent bias that is inherent in survey research. Too, survey fatigue may have been a factor. Although there were 30 questions, there were 50 parts to the survey, many of which required school student demographic data that may have not been readily available. Some respondents skipped the entire student demographics section.

Several responding schools were included in the survey collection process that the CDE does not recognize as rural, though the commercial mailing list had placed them on the rural school database. Eagle County recently was changed from rural to non-rural status. Two respondents were from Eagle County schools. Both were completed and included in the analysis of data. Gateway School, though technically a Mesa County Valley School District 51 school, is situated more than an hour from Grand Junction and has a staff of five teachers that serve 25 students. Gateway’s response data were included in the analysis. Cherry Valley Elementary, a Douglas County School, is situated is a large school district and therefore not considered a rural school by CDE definition. Yet Cherry
Valley Elementary has six teachers and 29 students. It is in Franktown, population 295. Including these schools, to some extent, created the possibility of over-representing rural schools that do not fit the CDE definition.

Summary

This chapter contains the results of the analysis, connects the analysis back to the research questions, and demonstrate consistency of the analysis with cross-sectional survey methodology. Survey items most pertinent to the research questions were structured to measure specific reasons for implementation, challenges of implementation, and to verify the respondents’ claims regarding implementation levels. The main findings of the analysis were summarized in each section. The majority of respondents were school principals (97%), and the student races most represented in the survey were Anglo ($M = 178.81, SD = 143.69$) and Hispanic ($M = 87.71, SD = 90.071$). Responses represented 38 small rural districts and 27 rural districts, for a total of 65 out of 148 districts (43.9%).

Implementation reasons and implementation challenges showed weak correlations with implementation levels. Two reasons--preparing students for life ($M = 3.67, SD = .604$) and perceived need ($M = 3.60, SD = .738$)--had the highest mean scores. For responses about challenges, recruiting and training teachers ($M = 2.75, SD = .892$) and competing priorities ($M = 2.72, SD = 1.015$) produced the highest means.

Chapter V concludes the study with a consideration of the findings and how well they answer the research questions. Limitations, delimitations and assumptions are detailed. Recommendations for practice and further research will be made, as well as conclusions regarding previous research and the wider fields of interest.
CHAPTER V
DISCUSSION AND RECOMMENDATIONS

The development of SEL as an integral part of formal education continues around the globe (Torrente, Alimchandani, & Aber, 2015). Research has shown that school is a good place for youth to learn these skills, and SEL makes a positive difference in their lives (Weissberg, 2019). This research study was intended to see how schools implemented SEL in their schools and which obstacles educators encountered that mattered. It also sought to identify the driving forces behind their decision to move forward with SEL programming.

Research Summary

Much of recent school reform efforts have been directed at implementing or improving SEL instruction and programming (Weissberg et al., 2015). For academic improvement, leveraging the affective domain is a necessary part of the school improvement conversation (Immordino-Yang, 2015; Mart et al., 2015). SEL emphases also should result in development of young people who as adults become positive members of their families, neighborhoods, workplaces, and countries (Elias et al., 1997; Elias et al., 2015; Weissberg et al., 2015).

Adolescent behavior remains an important focus for school systems as schools work to mitigate the prevalence of criminal and disruptive behavior that impedes educator efforts (Steinberg & Lacoe, 2017). In attempts to address this issue, many state education departments have adopted SEL frameworks, processes, programming, or
recommendations to meet similar ends (CASEL, 2012). SEL is known to reduce unwanted adolescent behaviors (Gullotta, 2015; Tolan et al., 2015) as well as reduce drug use and school suspensions while raising student academic performance (Durlak et al., 2011; Taylor et al., 2017). Other benefits are economic. Belfield et al. (2015) found that quality programs yield an 11:1 return on dollars invested in SEL.

Current SEL research is inclusive of the work from related fields, and educators face the great task of making sense of how these academic disciplines overlap and/or impact one another in the school context. Neuroscience has brought the study of the adolescent brain into the educator professional development conversation (Blair & Raver, 2015). Learning, behavior change, child development, information processing, and systems theories all have served to inform SEL (Brackett et al., 2015). Efforts have been geared toward newer approaches such as mindset training and developing trauma-informed classrooms all the while keeping educators mindful of equity and multicultural competence. School culture and climate are two more areas complemented by SEL and a part of a school’s systems.

**Statement of the Problem**

Even with recent progress at the state and local levels in the area of SEL development, effective SEL implementation at the school level has been elusive (Elias et al., 2015; Weissberg et al., 2015). More research is needed on SEL implementation in general. Implementation challenges, specifically, is one area where more research is needed (Durlak, 2015). Challenges for implementation within the rural school landscape are perhaps starker. Principals have difficulty recruiting, training, and retaining teachers (Best & Cohen, 2014; Brenner, 2016; Bryant, 2007; Culbertson & Billig, 2016; A. B.
Meyers et al., 2015). Rural districts lack necessary mental health and other SEL-related services, partly due to geographic isolation and partly because of poor local economies (Bryant, 2007; Culbertson & Billig, 2016; Mueller, 2008; San Antonio, 2018; Wimberly & Brickman, 2014). What continues to be unclear is which challenges principals and other leaders in rural schools face that might be distinctive to their settings. Many rural schools, regardless of the challenges, implement SEL programming. The driving force behind their decisions to move forward with SEL implementation rural Colorado also is largely undocumented in research literature.

**Purpose of the Study**

The purpose of this quantitative study was to understand and discover more about SEL implementation efforts in rural schools in Colorado with specific interest in implementation impetus and challenges. School leaders in charge of SEL implementation were surveyed to gauge the import of implementation challenges and implementation reasons. Those answers were compared to schools’ levels of implementation to determine if any challenges or specific reasons showed correlations that might inform future implementations.

**Research Questions**

To support the body of knowledge in SEL research, this chapter contains discussion and future research possibilities to help answer two research questions:

Q1 Do implementation challenges identified by rural Colorado school leaders predict levels of implementation?

Q2 Do the impetuses identified by rural Colorado school leaders for implementing SEL predict levels of implementation?
Methodology

The importance of reasons and challenges in the area of school implementation as constructs is supported by a growing research base. Durlak (2015) described the necessity of systematic methods in implementation practices. The CASEL model provided known practices that could be verified through survey research. For this study, rather than asking for respondent interpretation of constructs pertinent to SEL implementation, “a level of objective truth and meaning” (Crotty, 1998) was the intent of the data collection. The study required measuring known constructs—the dependent variable being schools’ levels of implementation and dependent variables being implementation challenges and reasons. Because the level of literature supporting these factors were well-defined and already deemed to have high importance or impact, an objectivist stance was taken for the study. Also, verification of school SEL practices was obtained through survey responses to corroborate self-reported levels of implementation.

A cross-sectional survey design was used. A public directory was used to contact the potential respondents via email. Confidential responses were collected from a potential sample of 441 school leaders in charge of SEL implementation in rural Colorado schools. The research method used for this survey design was an online questionnaire which was administered using the Qualtrics XM platform. The analytical tool used was the IBM SPSS data analysis software package (Version 26).

Discussion of Findings

Presented in this section are discussion of results pertinent to the research questions. Observations about school leaders were made based on their levels of experience being a possible factor in implementation. Schools’ declared levels of
implementation are discussed, along with the data intended to verify if the declared level of implementation matched the practices required to make such a claim. The role of impetus and challenges are central to the research question. Correlations and other observations were made. Limitations, delimitations, and assumptions are explored, and recommendations about policy and practice follow.

**Overview**

There were few significant correlations between levels of implementation and implementation reason and challenges, and most correlations were moderate or weak. Based on this study, neither challenges nor reasons for implementation appear to have strong predictive value for SEL implementation. As a group the school leaders responding reported SEL implementation levels that overall seemed to match their observations of SEL practices and systems in their building and district, indicating an accurate level of awareness of their efforts with SEL. A wide variety of programming and approaches to SEL were being attempted by leaders with a wide range of experience.

**School Leaders**

Principals accounted for 86% of the survey responses. The number of males and females responding were nearly even. The average years of SEL administrator experience was six. Seventy-four (64.4%) of principals had been implementing SEL for four years or less.

An administrator with extensive years of experience will have implemented other initiatives, often supported by a broad base of research. For “older” topics such as standards-based grading or technology-assisted learning, typically impetus and vision are more clearly defined, and there is broader educator and community acceptance for the
topic. SEL, in contrast, often lacks adopted standards and practices, vision in policy, funding, and a broad research base (Durlak, 2015). Assigning this implementation to a novice or newer administrator who already has other priorities suggests a higher possibility of weak implementation.

**School Levels**

School leaders declared their levels of implementation on a scale of 1-4: *Just beginning* (1), *Partially implemented* (2), *Mostly implemented* (3), and *Fully implemented* (4). Collectively ($N = 113$), they ranked themselves above the four-point scale midpoint as the mean implementation score ($M = 2.70$, $SD = .889$). The scale ratings were used to split the sample into a high group, whose respondents selected 3 or 4 ($N = 64$) and a low group, whose respondents chose 1 or 2 ($N = 48$). Twenty-three said they were fully implemented, 41 said mostly implemented, 39 said partially implemented, and nine say they were just beginning implementation.

**Verification of Practice**

Verification scores (Table 3) were used to determine how well self-declared implementation levels matched with the teaching practices necessary for full implementation. Scores for the high group showed several significant correlations ranging from weak to moderate. No low group correlations were significant, and almost of the correlations were negative. The high group mean scores were all higher than the low group’s.

The high group may have school leaders who better understand what is needed for full implementation, and they were able to observe teacher practices that would support their assertions about their implementation levels. The low group school leaders may be
aware that the required teaching practices are absent, and the implementation level they each chose was on par with those classroom observations.

The other indicators of full implementation were those related to school or district level activities and systems (Table 4). Again, the high group had higher means in all categories, and two of four correlations were significant but weak. For the low group, three of four categories were negatively correlated, and common planning correlated negatively \( (r = -.434, p = .002) \). Time being a valuable resource, paired with the number of initiatives for which teachers must plan and prepare for, it stands to reason that a low implementation level school has not made space and time for planning specifically for SEL instruction. Based on the verification factors of teaching practices and school and district-wide systems, it appears the school leaders’ beliefs of those requirements matches their belief about their level of implementation.

**Reasons and Challenges**

Results of the correlational analyses \((N = 113)\) demonstrated that reasons for implementation and implementation challenges were not significant predictors of levels of SEL implementation. Two reasons for implementation, preparing students for life \( (r = .096, p = .278) \), and perceived need of social and emotional skills training \( (r = .280, p = .003) \), had significant but weak correlations with implementation levels. Reasons categorized as “internal” are named as internal because they were reasons generated by educators closest to the point of implementation \((M = 3.45)\). In fact, the less the reason had less to do with interacting directly with students, the lower the score it received.

The three implementation reasons with highest means were most altruistic. Staff perceived student need. They wanted to address student SEL deficits and prepare students
for life beyond school. The lower scoring reasons were the desire to mitigate student behavior and close achievement gaps. N. Brown, Bryce, and Trapanese (2019) found that teachers demonstrated commitment to SEL implementation, which supports prior research by Brackett, Reyes, Rivers, Elbertson, and Salovey (2012). An inference can be made from this study that teachers are less concerned with mandatory testing that defines academic gaps in two or three subjects and more concerned with the whole child and his or her future.

The “external” reasons scored lowest ($M = 2.18$). These were reasons that came from state or federal levels, such as mandates, or pressure from the local community or other schools or school districts. Again, this data may suggest that educators prioritize students above mandates, test scores, and other pressures from influences further from the classroom.

When comparing the mean of the internal reasons for implementation ($M = 3.45$) compared to the challenges for implementation ($M = 2.39$), an inference again can be made. Principals and other SEL leaders overall felt stronger about why they should implement SEL than what challenges they may face. On one hand this could mean that the spirit of the educator determines that no challenge will prevent people from moving forward with what is best for students. The study did not utilize questions that attempted to validate respondents’ perspective on the impact of the challenges, so there is not a data set for judging whether school leaders correctly estimated the challenges of implementation.
Assumptions

Foundational assumptions in quantitative research are that reality exists outside the researcher and that this knowledge can be measured objectively. Objects of interest can be measured by instruments such as a survey and then examined to determine if patterns are present. Rational theories can be constructed to predict facts or explain data (Hathaway, 1995).

Although social desirability, as mentioned previously in this paper, could create response bias, a positive pre-supposition was made that survey participants responded honestly and willingly. The minimum number of sensitive questions in this study’s survey should have increased the likelihood that responses were truthful. Confidentiality of respondents was guaranteed. Participation was voluntary, and they were given the option to drop from the study at any time with no ramifications. The candid nature of the short response sections indicated that many respondents were assured their responses would be kept confidential.

Assumptions were made about the variables. Reasons and challenges typical of SEL implementation are described in research literature. Certainly, someone among the respondents could have cited a reason not offered on the survey, yet the implementation reasons and challenges mentioned in literature were predominant. Other answers were assumed to be outliers.

An assumption of the study was that SEL will continue to be an important topic in future years. SEL implementation in particular is assumed to be crucial to success and that schools will continue to struggle with and desire to improve implementation as noted in the literature review section of this study. Also, at the school level, researchers can
assume that educators will desire to address SEL deficits in students. A growing base of literature indicates administrators and teachers alike value SEL instruction and programming.

There is also the assumption that school finance formulas and federal, state, and local economies will not change soon. A change meaningful enough to reduce or end implementation challenges is highly unlikely given the entire history of American education indicates resources have more often than not been inadequate (Reese, 2011). The need for more resources is likely to remain static, with the exception of a landmark event to change the current situation.

**Limitations**

The study was limited by the sample size. With a 95% confidence level, a potential pool of 441 respondents, and a margin of error of 5%, the ideal sample size was 206, well above the 113 used for the data analysis. As discussed in Chapter IV, the potential pool of respondents is likely less than 441 due to the likelihood that there are many schools or districts choosing not to implement SEL at the time of the study. Forty-five of 168 respondents (26%) said they currently were not implementing SEL. Using that same rate, 26% of 441 is 115 potential respondents not implementing SEL. That leaves a pool of 326 respondents, theoretically. The ideal sample size would then be 177. The study would still be short 64 responses to attain desirable statistical power. Ultimately, the actual pool size was unknown, and determining a proper sample size was impossible at this point without further research to determine how many principals or other leaders actually perform implementation functions.
Education laws and guidelines in each state are dissimilar, and states respond differently to federal mandates. Therefore, rural schools in other states may not have the same challenges as those in Colorado. Although the body of evidence in literature indicates certain implementation challenges apply to a broad range of rural schools, rural schools in certain states may encounter challenges not mentioned in the study. The study’s results, then, even with adequate statistical power, may not be generalized to states or the entire country.

Possible explanations for the low response rate are numerous. The survey remained open for months, including the typical winter break period. Extra notifications were sent when the proposed efforts were maximized. I called colleagues and friends and contacted educational organizations asking them to pass the word that the survey request was important and may provide useful information to them. I posted on social media that the email survey link was available. I put out requests for names of recently-hired principals in the event that turnover had created incorrect contacts in the database used for the study.

School principals typically are short on time as a resource. Unless they see that the survey has a true benefit, they may not believe their input is worth their time. If the state department of education were to survey principals, the state researchers may receive a higher response rate because principals perceive their views may spark a change in policy or funding.

Although the questionnaire was meant to be brief as possible with 32 questions, there were 55 considerations a respondent had to process to complete the survey. Many questions had multiple parts. With requests for survey participation flooding one’s
mailbox, it may be difficult for principals to prioritize them and simply write an email rule to divert anything with the word “survey” in it to the junk folder.

**Representation**

Additional verifications of representation were not performed. Individual schools’ levels were not verified individually by using results of the verification questions to correlate to each school. That data could have been used to tally the number of schools with various correlations and perhaps use that data to count the number of schools in terms of high and low implementation levels but also in quartiles. Also, although there was an analysis to determine how many rural school districts were represented in there was no attempt to map all GPS locations to cross reference school districts geographically.

**Survey Instrument**

At the time of the study, a survey instrument did not exist that measured the variables of interest. A tool was developed and used for the first time, so the reliability has not been established. Also, the study was not conducted over an extended period of time. Data captured was a snapshot of what the respondent was seeing at the time when responding to the survey questions. A proven tool and responses captured in phases or over the course of multiple school years would generate more reliable data.

**Delimitations**

Delimitations were set so the study did not become impossibly large to complete and served to narrow the focus to the three variables of interest. An objectivist stance precluded the potentially vast number of responses of open-ended questions. Also, I believed the likelihood of receiving a response was higher for a survey with mostly Likert
scale response options rather than open-ended responses which would require more time invested on the part of the respondent. Existing literature supported the list of reasons and challenges faced by school leaders. This negated the need for respondents to define or analyze them.

Demographic data helped show the reader the range of answers for respondents, schools, and students but was not used to find correlations with the variables of primary interest to the study. Also, the independent variables were not cross-tabulated to discover how combinations of variables correlations with implementation levels. The review of literature in the area of SEL implementation seldom referred to demographics of respondents or students in terms of how they impact implementation. Rather, the mention of students was typically in the context of certain demographic strata being negatively impacted by poor implementations. The survey questions did not seek to uncover poor practice, rather only a respondent’s self-declaration of their perceived level of implementation.

The choice to limit responses from rural Colorado was a purposeful choice for the sake of learning more about my own state’s implementation efforts with a desire to fill a gap in the literature. Broadening the survey to other states might increase the N group, but the potential for states having dissimilar experiences would convolute further the interpretation of survey results.

As stated earlier, the sample population was limited to smaller schools, which literature suggests have challenges different than larger schools. The sample was also limited to administrators of SEL, mostly building principals. Classroom teachers are closest to the point of implementation, but they have only a view of their experience at
school. Principals, who are tasked with being responsible for monitoring
implementations, are best able to provide a view of the most classrooms and experiences.
Surveying or interviewing teachers would be a worthy endeavor but is beyond the scope
of the study.

A conscious choice was made not to attempt data analysis of responses based on
school size. A smaller sample was anticipated for this variable. Of the five enrollment
ranges, three ranges were represented by less than 10 responses.

Student race and ethnicity were reported but not used for correlational analysis.
The mean scores for the study reflected proportionally similar to the Colorado general
population, with Anglo and Hispanic or Latino populations making up a large majority of
the total with the remaining races accounting for much smaller percentages. Several
schools responding had populations unique to rural districts and using their schools
race/ethnicity totals in analysis almost certainly would make them identifiable. Also, it
was not the goal of the study to identify issues of equity in SEL instruction in rural
schools.

**Implications for Practice**

Seventy school leaders named SEL programs being used in their schools. Since
48 total programs were named, one can infer there is little agreement on which program
best can building SEL skills for students in rural schools. A review of programs and their
effectiveness would be foundational to future implementations. A limitation of the study
was that leaders were not asked why they selected their SEL program. Some programs
named were of the systemic variety, such as PBIS, where each staff member support an
effort to recognize and encourage appropriate student behavior. Others, such as Why Try,
focus on students with motivational issues, possibly linked to SEL gaps. Still others, such as mindset programs, typically lend themselves to classroom level direct instruction with support from all staff who use the terminology and demonstrate growth mindsets themselves. Although rural Colorado schools each have unique characteristics, they all have students with SEL gaps, and best practice would require finding the best comprehensive programming available.

Rural principals, like their teachers, often have limited access to training and support which can be beneficial for initiating a new implementation. Given the wide variety of SEL programs named, there is a possibility that networking around the topic of SEL is limited or unavailable to rural school leaders. Like teachers, principals working together have a laundry list of topics to discuss when they meet formally or reach out to a colleague. Future practice may require that SEL become a higher priority for networking principals.

Although correlations between levels of implementation and challenges and reasons were not strong, a trend was seen that may suggest high levels of implementation did have in common a sense that obstacles were manageable. School leaders that indicated their schools had a high level of implementation generally speaking also scored the challenges as having less impact ($M = -.13$). This could be because of their situations, certainly. Perhaps their finances are better, or the principal has had recent good fortune in retaining teachers. Another possibility is that their staff had a mindset to overcome challenges which implies that doing work with the educational mission and vision would be crucial to successful implementation.
Another aspect of the data implied high implementers had found the correct impetus for moving forward with SEL implementation. The mean score for internal reasons was 3.5 on a four-point scale. The internal reasons were very student-focused: preparing youths for life adults, perceiving a student need, and addressing specific SEL gaps interfering with student success. An organization can more easily adapt to change with a new implementation once they have answered the “why?” about their work (Sinek, 2009). Again, establishing a school’s mission and vision are critical to answering the “why?”

School leaders with high implementation levels also rated classroom and building practices on the higher end of the scale. Assuming their observations and beliefs are correct, one can assume the practices are in place purposefully. Because the practices are supported by a research base and highly desirable for implementation, a principal would be wise to encourage those practices long before attempting an official implementation. Many of the practices, such as acknowledging positive behavior or encouraging appropriate student behaviors during cooperative learning activities, already exist in schools. Building on existing teacher skill sets and knowledge does not require a commitment to a purchase or permission for adoption.

Future Research

Overall, the study results indicate that there is no solidarity around the topic in SEL for Colorado rural school districts. The literature base indicated that the typical rural district in America, depending on its situation, logistics, funding, and capacity, moves forward with implementation efforts however they can. Nor did the study show that specific challenges take higher priority to attain successful implementation or that
impetus must have a certain set of reasons. It is clear, however, that this topic has many facets (see Appendix J).

There is still much unknown about how and why rural leaders proceed with SEL implementation. Key questions resulted from considering this study:

- Why did schools implement their chosen program? Was it cost or convenience? Was it a lack of awareness of, or access to, other programs?
- How might combinations of reasons or challenges correlate with implementation levels in a study done with a larger sample?
- How much time and effort were invested in the work done prior to implementation at the building classroom level? Was groundwork with the community and staff a process that took months or years?
- What reasons do principals have for not implementing SEL? Many surveys were returned indicating no implementation efforts were being made at present.
- Do school leaders have enough training support for themselves? Do they feel ready to implement such an important initiative?
- What implementation obstacles arose after initial implementation?
- How might principals describe implementation efforts in their buildings? The few comments that were submitted provided insights not captured by the survey that could be useful for future studies.
- How are school districts paying for SEL programming? Are they using existing resources or reallocating human resources? Or are they generating or redirecting funds or accessing grants?
• What is the impact of poorly done SEL implementations? Are special populations affected more than others? Do poor implementations in rural schools do more harm than good?

• What type of advocacy efforts do principals engage in at the local, state, and national levels to improve access of SEL for their districts?

• What policies at the state or local level hinder or help rural principals efforts to implement and maintain SEL programming?

Several investigations would be useful to begin to answer some of these questions of what, how, and why. Through interviews of principals and other school leaders, a better sense of what is happening can be expressed. Through examination of written policies such as mission statements and declarations about SEL in a school community may uncover more about why programming choices were made. Principal responses to district, federal, and state written policies also may yield answers. Frequency of responses to these questions will be important, but also the levels of agreement, importance, and likelihood will serve to fill in the gap in understanding about the rural school SEL landscape.

**Broader Policy Implications**

While the study suggested considerations for future work in this area, recent research suggests other aspects should be considered when studying SEL implementation. Assessments, which were not a consideration for this study, are central to successful SEL implementation (Denham, 2015; Elliott et al., 2015; McKown, 2015; McKown, 2019). Development of standards, assessments that correctly measure student outcomes, and the instruction that provides and supports the learning also will be required
to meet the challenges of appropriate and successful SEL implementation (McKown, 2019). Finally, with the changing landscape of SEL, professional development may require non-standard approaches to achieve SEL goals. Teachers, for example, will be required to attend to their own social and emotional development to improve their ability to provide SEL instruction (S. M. Jones, Bailey, & Kahn, 2019).

S. M. Jones et al. (2019) offered guidelines for policymakers with regard to statewide efforts to improve SEL in schools. First, a needs assessment should be conducted to help states understand their situation so they can plan and engage stakeholders. Second, approaches should be aligned to reduce the weight of implementing a new initiative. Third, the focus should remain on adults, not just their professional development but also their personal development in social and emotional skills. Finally, policymakers should develop and communicate a compelling message and a clear plan.

McKown (2019) noted that SEL challenges are also opportunities. McKown articulated a series of opportunities, particularly in the area of assessment interpretation and how to move forward with results of universal assessments with high impact. SEL assessments will need to balance psychometric rigor with practical relevance. Self-report assessments are at risk of social desirability response bias; rating scales can impose a burden in large-scale settings and require accurate observations that are vulnerable to bias; and direct assessments, though highly reliable when well-constructed, are few in number that are available to educators. Further, some assessment indicators measure proximal and distal outcomes of competencies rather than the competencies themselves, possibly limiting their value.
The conversation around SEL assessments should balance the priorities of assessment developers with the practical needs of educators (McKown, 2019). Both Common Core and NCLB assessment endeavors were largely maligned by educators for their impractical and seemingly invasive effects at the school level (Phelps, 2017). Assessments will need to be valid, reliable, easy to administer, and have useful impact to meet the challenge. They also should be supported by the evidence. To build assessments that meet the challenge also will require agreement regarding a coordination of standards and professional learning. Finally, the assessments will need to be sensitive to cultural contexts (pp. 215-217). To shorten the journey from should be to what is, research is needed “into the implementation, wide-scaled dissemination, continual monitoring, improvement, and sustainability of SEL programs that have demonstrated their initial value (Mahoney et al., 2018).

Also pertinent to the conversation about the future of SEL is how to prepare and promote teacher well-being (S. M. Jones et al., 2019; Schonert-Reichl, 2019). Teacher stress and frustration results in collateral damage to students. Pre-service preparation should include SEL for the teacher as well as how to instruct, support, and promote SEL for students (Schonert-Reichl, 2019).

**Conclusions**

This study perhaps provided answers about rural Colorado schools and their SEL implementations, but even more questions resulted. The literature base for rural school issues continues to grow, but many questions about how SEL is faring in rural settings remain unanswered. Given the challenges and competing imperatives that drive education today, the task is great. The cost alone is a major obstacle. Krachman and LaRocca
(2017) found that $21-$47 billion per year is devoted to SEL in terms of expenditure on SEL related products and programs as well as teacher time focused on SEL. Currently, teachers spend only 8% of their time per week on SEL. Approximately $640 million was spent on SEL-related products in one year (Krachman & LaRocca, 2017) compared to more than $2 trillion allocated by the U.S. government to the 2020 coronavirus pandemic (Coronavirus Aid, Relief, and Economic Security Act, 2020) or the $740.5 billion budgeted for National Security in 2020 (National Defense Authorization Act for Fiscal Year, 2020). This comparison in expenditures speaks to prioritization of resources in the United States. National defense is prioritized in the event of emergencies and to prevent emergencies. Health emergencies such as the one resulting from the spread of coronavirus required a significant response, yet the extent of the severity and consequences were unknown at the time of allocating the resources. For America’s youth, the damage due to SEL deficits is a known and quantified entity, yet resources are lacking in that area.

Given that SEL deficits in youth are well-documented and persistent, a higher commitment to research and funding will be required to meet the needs of American schools. Patel et al. (2018) found that mental disorders alone will reach a global cost of $16 trillion by 2030. Insel (2008) found that the U.S. incurs a cost of $193 billion annually just from lost earnings.

Currently, lawmaker allocation to the social and emotional deficits of America’s youth does not equate its level of urgency. Unlike the military, where isolationism often comes with heightened national defense, or in the case of a virus of epidemic proportions, where “social distancing” and quarantines are seen as the first steps toward achieving a
solution, SEL requires making and keeping contact with those affected, those in a state of emergency in schools or at home, and those who grew up with serious social and emotional deficits that impact every aspect of their lives. With a return rate of 11:1 on the investment, policy makers cannot afford not to acknowledge the emergency and act accordingly.
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APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL
DATE: September 13, 2019

TO: Jimmie Phillips
FROM: University of Northern Colorado (UNCO) IRB

PROJECT TITLE: [1403466-2] IMPLEMENTING SOCIAL AND EMOTIONAL LEARNING IN RURAL COLORADO SCHOOLS: A QUANTITATIVE STUDY OF THE IMPACT OF IMPETUSES AND CHALLENGES

SUBMISSION TYPE: Amendment/Modification

ACTION: APPROVAL/VERIFICATION OF EXEMPT STATUS

DECISION DATE: September 13, 2019
EXPIRATION DATE: September 13, 2023

Thank you for your submission of Amendment/Modification materials for this project. The University of Northern Colorado (UNCO) IRB approves this project and verifies its status as EXEMPT according to federal IRB regulations.

We will retain a copy of this correspondence within our records for a duration of 4 years.

If you have any questions, please contact Nicole Morse at 970-351-1910 or nicole.morse@unco.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Northern Colorado (UNCO) IRB's records.
APPENDIX B

CONCEPTUAL MAP (1)
Leaders were surveyed about their implementation efforts in the area of SEL. Implementation challenges as well as reasons for implementation were measured to determine if reasons and challenges were predictive of implementation levels.
APPENDIX C

SOCIAL AND EMOTIONAL LEARNING IMPLEMENTATION
SURVEY FOR SCHOOL LEADERS
SEL Implementation Survey for School Leaders

Q1 Are you the person primarily responsible (even if the duty is shared with another leader) for leading the implementation of SEL programming in your school or district? If "NO" please forward the email containing the survey link to the appropriate person. If you are not currently implementing SEL, please indicate that below. Only one survey should be filled out per building.

☐ YES
☐ NO
☐ We are not implementing SEL programming at this time.

Skip To: End of Survey If Are you the person primarily responsible (even if the duty is shared with another leader) = NO

Skip To: End of Survey If Are you the person primarily responsible (even if the duty is shared with another leader) = We are not implementing SEL programming at this time.

Skip To: Q2 If Are you the person primarily responsible (even if the duty is shared with another leader) = YES

Q2 Which title best describes you?

☐ Superintendent
☐ Superintendent/Principal
☐ Principal
☐ Assistant Principal
☐ Other non-classroom educator (Instructional Coach, Coordinator, Director, etc.)
☐ Classroom Teacher
☐ Licensed Mental Health Care Worker (non-educator license)

Q3 What is your gender?
Q4 How many years of school have you completed as school administrator in your current position?
________________________________________________________________

Q5 How many years have you completed as the person in charge of SEL programming?

○ This was the first year
○ 2-4 years
○ More than 4 years

Q6 How many certified teachers work in the building(s) for which you are SEL administrator?

○ 0-20
○ 21-40
○ 41 to 60
○ 61-80
○ More than 80
Q7 Which range fits the total enrollment of your SCHOOL or SCHOOLS for which you administer SEL?

- 50 or less
- 51-100
- 101-200
- 201-300
- 301-400
- 401 or more

Q8 Which grade levels have implemented SEL? Check all for which you are the SEL administrator.

- [ ] Pre-school
- [ ] Elementary School
- [ ] Middle School
- [ ] High School
- [ ] K-8 School
- [ ] K-12 School
- [ ] Other
Q9 What percentage of students in your building(s) receive free meal or reduced meal prices?

- 0-25%
- 26%-50%
- 51%-75%
- 76%-100%

Q10 What percentage of students in your building(s) are English Language Learners (ELL)?

- 0-25%
- 26%-50%
- 51%-75%
- 76%-100%

Q11 What percentage of students in your building(s) are of the following races?

- White (Including Middle Eastern origin)
- Hispanic or Latino
- Black or African American
- Asian (including Indian subcontinent and Philippines origin)
- American Indian or Alaska Native
- Native Hawaiian or Other Pacific Islander
Q12 In your current position as SEL administrator, for what grade levels have you implemented SEL? Check all that apply.

☐ Pre-school
☐ Primary/Intermediate
☐ Middle School
☐ High School

Q13 Is there anything you would like to add about the previous questions in this section?

________________________________________________________________

Q14 Rate the following statement using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>Just beginning</th>
<th>Partially implemented</th>
<th>Mostly implemented</th>
<th>Fully implemented</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which of the following best describes the implementation of SEL programming at your school?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Q15 For each of the following reasons for implementing SEL, please indicate the level of influence.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Not at all influential</th>
<th>Slightly influential</th>
<th>Somewhat influential</th>
<th>Very influential</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>To mitigate negative student behavior</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To help close achievement gaps</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To better prepare students for life as adults (Career, Wellness, Relationships)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To address the needs of students with significant social-emotional skill deficits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q16 For each of the following reasons for implementing SEL, please indicate the level of influence.

<table>
<thead>
<tr>
<th>Reasons</th>
<th>Not at all influential</th>
<th>Slightly influential</th>
<th>Somewhat influential</th>
<th>Very influential</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational or curriculum mandates</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student need perceived by school or district staff</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community pressure to reduce bullying, suicide, crime</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommendation from other school(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q17 For each of the following challenges in implementing SEL, please indicate the level of the challenge.

<table>
<thead>
<tr>
<th>Challenge</th>
<th>Not a challenge</th>
<th>Somewhat of a challenge</th>
<th>Moderate challenge</th>
<th>Major challenge</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic barriers</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Geographical isolation</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>SEL competes with other school priorities</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Recruiting, training, and retaining teachers</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>School/district culture, willingness, or efficacy</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Lack of stakeholder support or community partnerships</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q18 Is there anything you would like to add about the four previous questions in this section?
Q19 Rate the following statement using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>Rarely or never</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Always or almost always</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teachers at our school utilize free standing lessons designed to enhance students’ social and emotional competence explicitly.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q20 Rate the following statement using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>Rarely or never</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Always or almost always</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teachers at our school utilize teaching practices such as cooperative learning and project-based learning, which specifically promote SEL.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Q21 Rate the following statement using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>Rarely or never</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Always or almost always</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers in our school integrate SEL into academic curriculum such as language arts, math, social studies, or health</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q22 Rate the following statement using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>Rarely or never</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Always or almost always</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>At our school there are organizational strategies used that promote SEL as a school-wide initiative that creates a climate and culture conducive to learning.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Q23 Rate the following statement using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>Rarely or never</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Always or almost always</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers in our school utilize active forms of learning to help students master new SEL skills.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q24 Rate the following statement using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>Rarely or never</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Always or almost always</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers in our school utilize connected and coordinated sets of SEL activities to foster skill development.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Q25 Rate the following statement using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>Rarely or never</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Always or almost always</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers in our school utilize an SEL component that emphasizes developing personal and social skills.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Q26 Rate the following statement using the scale below.

<table>
<thead>
<tr>
<th></th>
<th>Rarely or never</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Always or almost always</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers in our school teach SEL by targeting specific social and emotional skills.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Q27 Rate the following statement using the scale below.

<table>
<thead>
<tr>
<th>At our school, we use a school-wide system to acknowledge and encourage positive behavior.</th>
<th>Rarely or never</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Always or almost always</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q28 Rate the following statement using the scale below.

<table>
<thead>
<tr>
<th>At our school, students interact with each other to create meaning of the social-emotional skills taught to them.</th>
<th>Rarely or never</th>
<th>Some of the time</th>
<th>Most of the time</th>
<th>Always or almost always</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q29 Rate the following statement using the scale below.

<table>
<thead>
<tr>
<th>Teacher teams in our school use a common planning time to build and/or improve SEL lessons.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rarely or never</td>
</tr>
<tr>
<td>☐</td>
</tr>
</tbody>
</table>

Q30 Rate the following statement using the scale below.

<table>
<thead>
<tr>
<th>The culture in the school district supports the development of students' social and emotional skills.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rarely or never</td>
</tr>
<tr>
<td>☐</td>
</tr>
</tbody>
</table>

Q31 Please name any programs that your school district has purchased or adapted for SEL.

________________________________________________________________
Q32 Is there anything you would like to add about the 13 previous questions in this section?

________________________________________________________________

Q33 Optional question: For which school building are you filling out the survey?

________________________________________________________________
SURVEY PARTICIPATION REQUEST LETTER

From: phil2305@bears.unco.edu (JB Phillips)
Sent: Month, Day, 2019
To: schoolleader@school.org
Subject: Survey of school leaders implementing SEL

Hello,

My name is J.B. Phillips, and I am a doctoral student in Educational Leadership and Policy Studies at the University of Northern Colorado. For my dissertation study, I am examining SEL implementation in rural Colorado schools. Because you are identified as the school leader in charge of SEL implementation, I am inviting you to participate in this research study by completing a brief survey. Your responses to this survey will help me determine schools’ efforts, challenges, and impetuses related to SEL implementation.

The results from this study will be used to inform future implementation practices. The survey is very brief and will only take about 5-7 minutes to complete. Please click the link below to go to the survey Web site (or copy and paste the link into your Internet browser) and then enter the personal code to begin the survey. Filling out and submitting the survey will enter you into a drawing for a $50 gift certificate. If you choose to participate, having your students’ ethnicity information available to enter percentages would expedite the process.

Your participation in the survey is completely voluntary and all of your responses will be kept confidential. The access code is to remove you from the list once you have completed the survey. Please do not include your name anywhere in the survey. No personally identifiable information will be associated with your responses to any reports of these data. Data from this research will have a high level of digital security and will be reported only as a collective combined total. The UNC Institutional Review Board has approved this survey. Should you have any comments or questions, please feel free to contact me at phil2305@bears.unco.edu or 970.250.4733.

Thank you for your assistance in this important endeavor.

Sincerely yours,

JB Phillips
APPENDIX E

KEY DEFINITIONS FOR RESPONDENTS
KEY DEFINITIONS FOR RESPONDENTS

Thank you for participating!
Below is a description of SEL and other key terms to aid you in completing the survey.

Definition of Key Terms

Social and Emotional Learning (SEL). Per Weissberg et al., 2015, the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to:

- understand and manage emotions,
- set and achieve positive goals,
- feel and show empathy for others,
- establish and maintain positive relationships, and
- make responsible decisions.

School leaders. For the context of this study, a building leader is any school district leader working at the school building-level responsible for the implementation and oversight of SEL instruction. Although typically the principal or assistant principal, this person may be titled as a coordinator, chairperson, counselor, or other designated member of the building administrative team or district-level team (Bambrick-Santoyo, 2012).

Four components that determine levels of implementation. Instruction that has:

- Free-standing lessons designed to enhance students’ social and emotional competence explicitly
- Teaching practices such as cooperative learning and project-based learning, which specifically promote SEL
- Integration of SEL and academic curriculum such as language arts, math, social studies, or health.
- Organizational strategies that promote SEL as a schoolwide initiative that creates a climate and culture conducive to learning. (“SEL Approaches,” 2017)

Implementation. Implementation refers to what a program consists of when it is delivered in a particular setting. Important aspects include fidelity, dosage, quality, participant responsiveness, program differentiation, monitoring conditions, program reach, and adaptation (Durlak & DuPre, 2008, p. 329).

Implementation Impetus. The overall motivation and incentive in place when a school faces the implementation of a new initiative (Durlak, 2015). Implementation reasons refer to the discrete examples identified in literature and by respondents in the study.
Implementation Challenges. The obstacles faced by educators attempting to execute steps for an educational initiative (Durlak, 2015).
APPENDIX F

HIGH GROUP CORRELATIONS
## Correlation with High Implementation Levels

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Pearson Correlation</th>
<th>Sig. (2-tailed)</th>
<th>M</th>
<th>SD</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Internal Reasons</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mitigate Behavior</td>
<td>.081</td>
<td>.525</td>
<td>3.45</td>
<td>.641</td>
<td>64</td>
</tr>
<tr>
<td>Close Gaps</td>
<td>.097</td>
<td>.448</td>
<td>3.11</td>
<td>.882</td>
<td>63</td>
</tr>
<tr>
<td>Life Prep</td>
<td>.213</td>
<td>.091</td>
<td>3.73</td>
<td>.479</td>
<td>64</td>
</tr>
<tr>
<td>Address Deficits</td>
<td>.188</td>
<td>.136</td>
<td>3.67</td>
<td>.6129</td>
<td>64</td>
</tr>
<tr>
<td>Perceived Need</td>
<td>.114</td>
<td>.370</td>
<td>3.75</td>
<td>.504</td>
<td>64</td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>0.14</td>
<td></td>
<td>3.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>External Reasons</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandates</td>
<td>-.023</td>
<td>.860</td>
<td>2.25</td>
<td>1.031</td>
<td>63</td>
</tr>
<tr>
<td>Community Pressure</td>
<td>.141</td>
<td>.270</td>
<td>2.79</td>
<td>.943</td>
<td>64</td>
</tr>
<tr>
<td>Recommended by Other Schools</td>
<td>.110</td>
<td>.399</td>
<td>1.87</td>
<td>.967</td>
<td>64</td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>0.08</td>
<td></td>
<td>2.30</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Challenges</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economics</td>
<td>.105</td>
<td>.408</td>
<td>2.55</td>
<td>1.068</td>
<td>64</td>
</tr>
<tr>
<td>Geography</td>
<td>-.142</td>
<td>.265</td>
<td>2.52</td>
<td>1.127</td>
<td>64</td>
</tr>
<tr>
<td>Competing Priorities</td>
<td>-.159</td>
<td>.210</td>
<td>2.80</td>
<td>.894</td>
<td>64</td>
</tr>
<tr>
<td>Recruit/Train Teachers</td>
<td>-.180</td>
<td>.156</td>
<td>2.78</td>
<td>1.091</td>
<td>64</td>
</tr>
<tr>
<td>Culture/Willing/Efficacy</td>
<td>-.197</td>
<td>.119</td>
<td>2.05</td>
<td>1.015</td>
<td>64</td>
</tr>
<tr>
<td>Lack of stakeholder Support</td>
<td>-.084</td>
<td>.511</td>
<td>1.94</td>
<td>1.006</td>
<td>64</td>
</tr>
<tr>
<td><strong>M</strong></td>
<td>-.11</td>
<td></td>
<td>2.44</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Correlation is significant at the 0.05 level (2-tailed), ** Correlation is significant at the 0.01 level (2-tailed)
APPENDIX G

PRACTICE TABLE
### Verification of Classroom Practices

<table>
<thead>
<tr>
<th>Group</th>
<th>Valid</th>
<th>Lessons</th>
<th>Practices</th>
<th>SEL</th>
<th>Target Skills</th>
<th>Integrated</th>
<th>Coordinated</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td></td>
<td>48</td>
<td>48</td>
<td>48</td>
<td>46</td>
<td>48</td>
<td>48</td>
<td>47</td>
</tr>
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<td></td>
<td></td>
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<td>0</td>
<td>0</td>
<td>2</td>
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<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.23</td>
<td>2.38</td>
<td>2.33</td>
<td>2.20</td>
<td>2.10</td>
<td>2.13</td>
<td>2.15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.112</td>
<td>0.110</td>
<td>0.096</td>
<td>0.119</td>
<td>0.091</td>
<td>0.092</td>
<td>0.101</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.778</td>
<td>0.761</td>
<td>0.663</td>
<td>0.806</td>
<td>0.627</td>
<td>0.640</td>
<td>0.691</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.606</td>
<td>0.580</td>
<td>0.440</td>
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Implementation Level

* $M = 1.8; SD = 0.394$

* $M = 3.36; SD = 0.484$
APPENDIX H

SYSTEMS TABLE
### Verification of Systems

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* Correlation is significant at the 0.05 level (2-tailed), ** Correlation is significant at the 0.01 level (2-tailed).
APPENDIX I

LOW GROUP CORRELATIONS
### Correlation with Low Implementation Levels

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<tr>
<th>Predictors</th>
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<th>$SD$</th>
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* Correlation is significant at the 0.05 level (2-tailed), ** Correlation is significant at the 0.01 level (2-tailed)
CONCEPTUAL MAP (2)